

EIMAC

division of varian

POWER GRID TUBES

QUICK REFERENCE CATALOG



EIMAC

division of varian

POWER GRID TUBES QUICK REFERENCE CATALOG

SEE INSIDE BACK COVER FOR
YOUR NEAREST SALES OFFICE

TABLE OF CONTENTS

TUBE NO.	TUBE CHARACTERISTICS	TYPICAL RESPONSE CURVES
	Pg. No.	Pg. No.
RECTIFIERS 5-24		
2-01C	6-7	6
2-25A	8-9	12
2-50A	8-9	12
8020/100R	8-9	12
2-150D	8-9	13
253	8-9	14
2-240A	10-11	13
250R	10-11	14
2-450A	10-11	15
2-2000A	10-11	15
2X1000A	16-17	18
2X3000F	16-17	19
575A	20-21	—
673	20-21	—
869B/BL	20-21	—
6894	20-21	—
6895	20-21	—
RX21A	20-21	—
KY21A	22-23	22
TRIODES 25-100		
25T	28-29	40
3C24	28-29	40
35T	28-29	40
35TG	28-29	40
75TH	30-31	41
75TL	30-31	41
100TH	30-31	41
100TL	30-31	41
152TH	32-33	42
152TL	32-33	42
3-200A3/592	32-33	42
250TH	32-33	42
250TL	34-35	43
304TH	34-35	43
304TL	34-35	43
5867A	36-37	43
450TH	36-37	44
450TL	36-37	44
750TL	36-37	44
1000T	38-39	44
1500T	38-39	45
2000T	38-39	45
3-400Z/8163	46-47	48
3-1000Z/8164	46-47	49
2C39A	50-51	54
3CPN10A5/7815	50-51	54-55
7698	50-51	55
3CPX100A5/7815R	50-51	54-55
3CX100A5/7289	52-53	54
3CX100F5/8250	52-53	54

TUBE NO.	TUBE CHARACTERISTICS	TYPICAL RESPONSE CURVES
	Pg. No.	Pg. No.
7211	52-53	55
3CX1000A7/8283	56-57	58-59
3CX2500A3/8161	60-61	64-65
3CX2500F3/8251	60-61	64-65
3CX2500H3	60-61	64
3CW5000A3	60-61	64-65
3CW5000F3	62-63	64-65
3CW5000H3	62-63	64
3CX3000A1	66-67	68-69
3CX3000F1	66-67	68-69
3CW5000A1	66-67	68-69
3CW5000F1	66-67	68-69
3CX3000A7	70-71	72-73
3CX3000F7	70-71	72-73
3CX5000H3	74-75	74
3CW10,000H3	74-75	74
3CX10,000A1/8158	76-77	78-79
3CW20,000A1	76-77	78-79
3CX10,000A3/8159	80-81	82
3CX10,000H3	80-81	82
3CW20,000A3	80-81	82
3CW20,000H3	80-81	82
3CX10,000A7/8160	84-85	86-87
3CW20,000A7	84-85	86-87
3CX15,000A3	88-89	90
3CX15,000H3	88-89	90
3CW25,000A3	88-89	90
3CW30,000H3	88-89	90
3CV30,000A3	88-89	90
3CX20,000A3	92-93	92
3CX20,000H3	92-93	92
3CW40,000H3	92-93	92
6696A	94-95	96
6697A	94-95	96
7480	94-95	96
3CW100,000H3	98-99	98

TETRODES 101-204

4-65A/8165	104-105	106-107
4-125A/4D21	108-109	110
6155	108-109	110
4-250A/5D22	112-113	114
6156	112-113	114
4-400A/8438	116-117	118
7257	116-117	118
4-1000A/8166	120-121	122-123
7843	124-125	126
4X150A/7034	128-129	130-131
4X150D/7035	128-129	130-131
4X150R/8296	132-133	134-135
4X150S/8297	132-133	134-135
4X150G/8172	136-137	138-139
4CX250B/7203	140-141	144-145
4CX250F/7204	140-141	144-145
4W300B/8249	142-143	144-145
4CX250R/7580W	146-147	148-149
4CX250K/8245	150-151	152-153

TUBE NO.	TUBE CHARACTERISTICS	TYPICAL RESPONSE CURVES
	Pg. No.	Pg. No.
4CX250M/8246	150-151	152-153
4CPX250K/8590	154-155	154-155
4CN15A	156-157	158-159
4CX125C	156-157	158-159
4CX125F	156-157	158-159
4CX300A/8167	156-157	158-159
4CX300Y/8561	160-161	162-163
4CX350A-8321	164-165	166-167
4CX350F/8322	164-165	166-167
4CS250H	164-165	166-167
4X500A	168-169	168-169
4CX600A	170-171	170-171
4CW800A	170-171	170-171
4CX1000A/8168	172-173	174
4CX1000K/8352	172-173	174
4CW2000A/8244	172-173	174
4CX1500B/8660	176-177	176-177
4CX3000A/8169	178-179	180
4CV8000A	178-179	181
4CX5000R/8170W	182-183	182-183
4CX5000A/8170	184-185	188-189
4CW10,000A	184-185	188-189
4CV20,000A	186-187	188-189
4CX10,000D/8171	186-187	188-189
4W20,000A/8173	190-191	190
4CX15,000A/8281	192-193	194-195
4CW25,000A	192-193	194-195
4CV35,000A	192-193	194-195
4CX35,000C/8349	196-197	198-199-200-201
4CV100,000C/8351	196-197	198-199-200
4CW100,000D	196-197	198-199-200
4CV250,000A	202-203	204

PENTODES 205-220

4E27A/5-125B	206-207	208-209
5-500A	210-211	210-211
5CX1500A	212-213	214-215
5CX3000A	216-217	218-219

PULSE MODULATORS 221-236

6C21	222-223	222-223
4PR60B/8252	224-225	224-225
4PR65A/8187	226-227	228-229
4PR125A/8247	226-227	229-230
4PR400A/8188	226-227	231-232
4PR1000A/8189	226-227	232-233
4PR1000B	226-227	233
4PR250C/8248	234-235	236

SOCKETS AND ACCESSORIES 237-244

SOCKETS AND ACCESSORIES-238-239-240-241

VAPOR-PHASE COOLING ACCESSORIES 242-243

OTHER PRODUCTS 244



POWER GRID TUBES

This catalog is intended to be a true QUICK REFERENCE CATALOG. While it contains sufficient data to enable most users to determine the suitability of each tube for a given application, it is always advisable to consult the detailed tube data sheet for complete data before finalizing a new equipment design.

Tube characteristics, maximum ratings and typical performance in recommended types of service are shown in tabular form. EIMAC application engineering department should be consulted for types of service other than those recommended.

Tubes are first broadly grouped by category; i.e., rectifiers, triodes, etc. Within each category they are further grouped into families on the basis of similarity in construction, or application. Characteristic curves are therefore shown after each family grouping, rather than with individual tube types.

The first page of each category contains a brief paragraph covering unique characteristics on tubes designed for a specific application.

A separate section containing detailed information on **sockets and accessories** is included in the back of the catalog.

For further information on EIMAC products contact Power Grid Tube Marketing, EIMAC Division of Varian, 301 Industrial Way, San Carlos, California, or your nearest Varian Field Sales Office. List of Field Sales Office addresses is contained on the inside back cover of this publication.

HOW TO USE THIS CATALOG

The EIMAC Division of Varian Associates manufactures a complete line of vacuum tubes and accessories including rectifiers, triodes, tetrodes, pentodes, pulse modulators, air-system sockets, heat dissipating connectors & contact-finger stock.

In addition to a standard line of glass-and-metal vacuum tubes, EIMAC offers a selection of ceramic and metal triodes, tetrodes and pulse modulators. They have been specially designed to withstand severe environmental conditions.

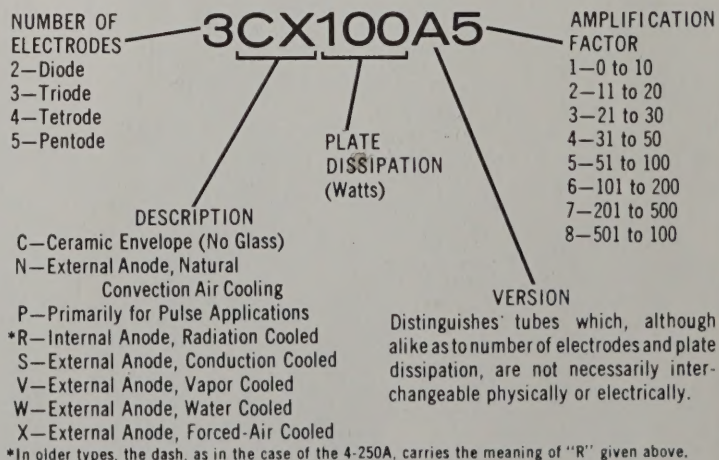
EIMAC power tubes are divided into two general classifications: the internal-anode, radiation-cooled glass types and the external-anode tubes, cooled by forced-air, convection or other means. EIMAC electron power tubes, including coaxial-based tubes for high-frequency operation, water-cooled and vapor-phase cooled tubes with power dissipation ratings up to 250 kilowatts, breechblock-based tubes for rugged environments, and lightweight tubes for airborne and pulse applications, are available.

A comprehensive research and development program produces experimental new tube types and modifies existing products to meet customer requirements. Application engineering services are willingly offered.

Since 1945 all new tube types developed by EIMAC have been given a type number chosen according to a coded number system. This system is designed to convey descriptive information about the tube.

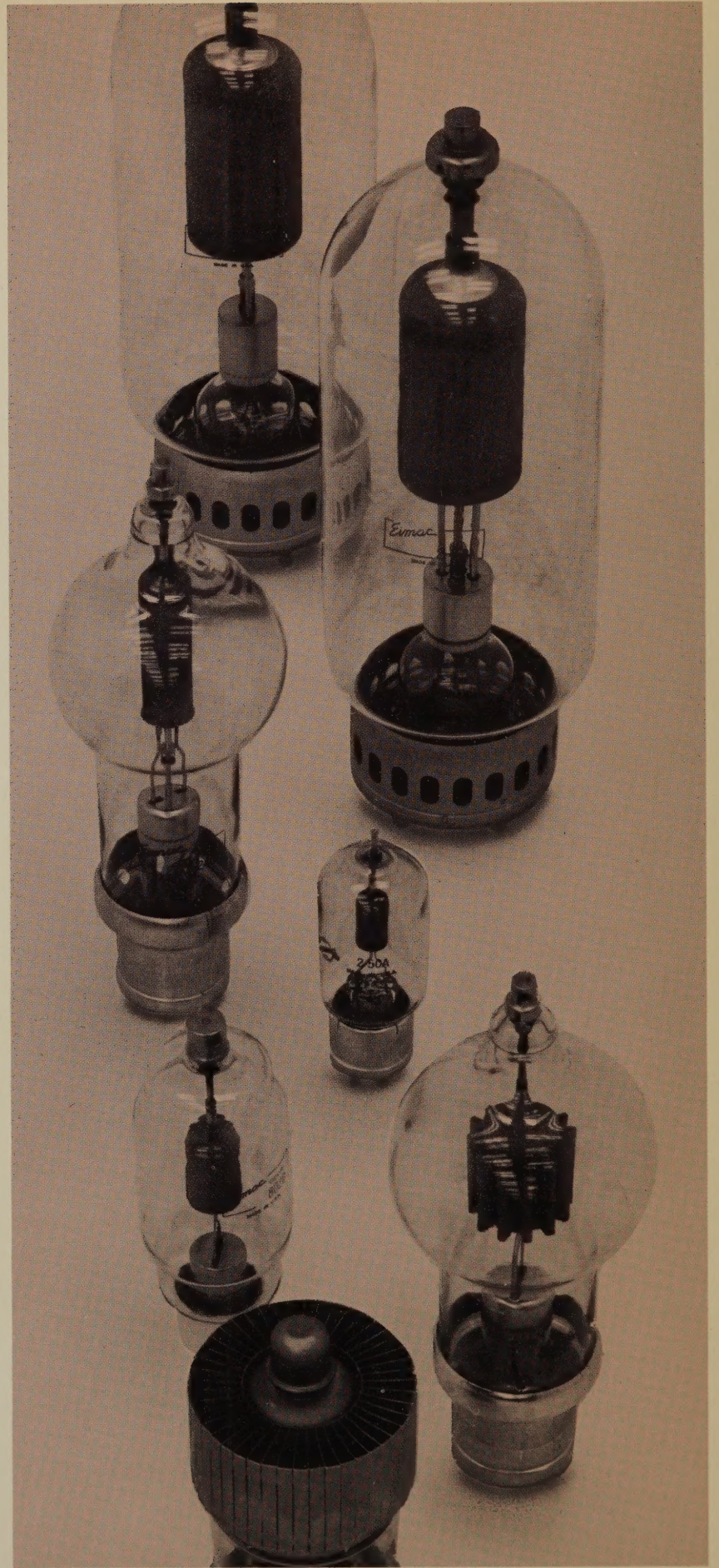
In general, the type numbers consist of: a numeral indicating the number of electrodes, one or more letters denoting special characteristics, a numeral representing the plate dissipation, and a final letter to distinguish the tube from others bearing similar preceding letters and numerals. Triode types carry an additional number to indicate their approximate amplification factor.

To illustrate the method of coding and the information the type number conveys, a 100-watt, ceramic, external-anode, forced-air cooled EIMAC triode, type number 3CX100A5, is broken down as follows:



*In older types, the dash, as in the case of the 4-250A, carries the meaning of "R" given above.

RECTIFIERS



RECTIFIERS

The following brief descriptions cover unique characteristics of Rectifiers designed for specific applications.

These data should be used as aids in systems design where tube requirements are generally firm.

2-01C

A general-purpose UHF instrument diode accurate within ± 1 db to 700 MHz. This diode is well suited to probe mounting and is useful as an indicator at frequencies as high as 3000 MHz.

250R

A high-vacuum diode for use in rectifier units, voltage multipliers, or in special applications, whenever conditions of extreme ambient temperatures, high operating frequency, high peak inverse voltages, or the production of high frequency transients would prevent the use of gas-filled rectifiers.

2X1000A

A high-vacuum diode for clipper-diode service. The 2X1000A may be used in circuits where the peak inverse voltage is as high as 25 kilovolts.

KY21A

A grid-controlled mercury-vapor rectifier recommended for use in power supplies or control circuits where a variable voltage at high current is desired.

INSTRUMENT DIODE



2-01C

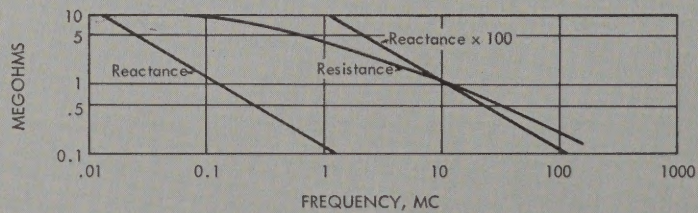
PERFORMANCE DATA

MAXIMUM RATINGS

TUBE TYPE	PEAK INVERSE VOLTAGE (volts)	DC CURRENT (amps)	PLATE DISS (watts)	SEAL TEMP (°C)
2-01C	1,000	0.001	0.1	175

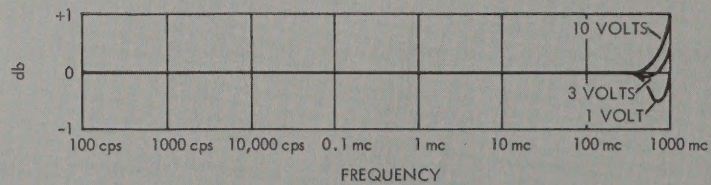
INPUT CHARACTERISTICS

2-01C



RESPONSE

2-01C



Input Impedance and Frequency Response of an Eimac 2-01C operating in a Hewlett-Packard Model 410B Vacuum Tube Voltmeter.
Reproduced from Hewlett-Packard Catalog No. 21-A, 1952.

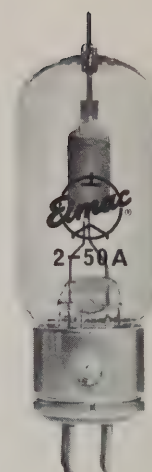
CHARACTERISTICS

CATHODE	HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
Oxide	5.0	0.31 to 0.39	Convection	1.813	0.545	0.2	—	—

INTERNAL ANODE



2-25A



2-50A

PERFORMANCE DATA

TUBE TYPE	MAXIMUM RATING					MAXIMUM PERFORMANCE CAPABILITIES (CHOKE-INPUT FILTER)			
	PEAK INVERSE VOLTAGE (volts)	DC CURRENT (amps)	PEAK CURRENT (amps)	PLATE DISS (watts)	SEAL TEMP (°C)	CIRCUIT	RMS INPUT (volts)	DC OUTPUT (volts)	DC OUTPUT (amps)
2-25A	25,000	0.05	1.0	15	225	1- ϕ full wave	7,900	8,000	0.1
						1- ϕ Bridge	17,700	16,000	0.1
						3- ϕ full wave	10,200	24,000	0.15
2-50A	30,000	0.075	1.0	30	225	1- ϕ full wave	10,600	9,500	0.15
						1- ϕ Bridge	21,200	19,000	0.15
						3- ϕ full wave	12,200	28,500	0.225
8020/100R	40,000	0.1	1.5	60	225	1- ϕ full wave	14,000	12,500	0.2
						1- ϕ Bridge	28,000	25,000	0.2
						3- ϕ full wave	16,300	38,000	0.3
2-150D	30,000	0.25	3.0	90	225	1- ϕ full wave	10,600	9,500	0.5
						1- ϕ Bridge	21,200	19,000	0.5
						3- ϕ full wave	12,200	28,500	0.75
253	15,000	0.35	2.5	100	225	1- ϕ full wave	5,300	4,750	0.7
						1- ϕ Bridge	10,600	9,500	0.7
						3- ϕ full wave	6,150	13,500	1.0



8020/
100R



2-150D

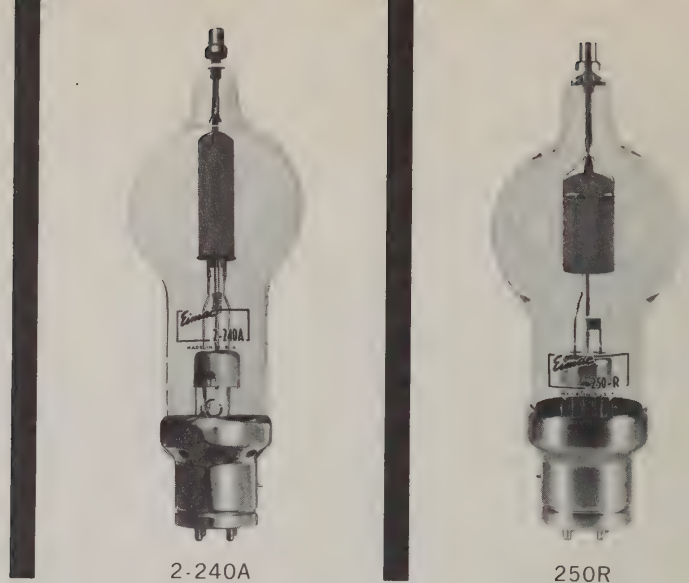


253

CHARACTERISTICS

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
6.3	2.75 to 3.15	Radiation and Convection	4.38	1.44	1.2	Small 4-Pin	Johnson 122-224 or National XC-4 or CIR-4 —*— HR-1 Heat Dissipator
5.0	4.0	Radiation and Convection	5.5	1.82	2.5	Medium 4-Pin	Johnson 122-224 or National XC-4 or CIR-4 —*— HR-3 Heat Dissipator
5.0	6.5	Radiation and Convection	8.0	2.32	4.0	Medium 4-Pin	Johnson 122-224 or National XC-4 or CIR-4 —*— HR-8 Heat Dissipator
5.0	13.0A	Radiation and Convection	8.88	2.5	9.0	50W Jumbo 4-Pin Bayonet	Johnson 123-211 or National XM-50 —*— HR-6 Heat Dissipator
5.0	10.0	Radiation and Convection	8.75	2.5	7.0	50W Jumbo 4-Pin Bayonet	Johnson 123-211 or National XM-50 —*— HR-8 Heat Dissipator

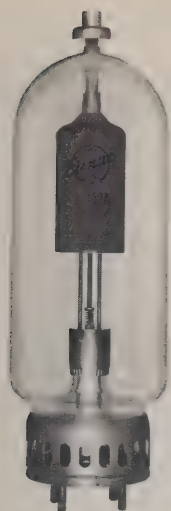
INTERNAL ANODE



PERFORMANCE DATA

TUBE TYPE	MAXIMUM RATING					MAXIMUM PERFORMANCE CAPABILITIES (CHOKE-INPUT FILTER)			
	PEAK INVERSE VOLTAGE (volts)	DC CURRENT (amps)	PEAK CURRENT (amps)	PLATE DISS (watts)	SEAL TEMP (°C)	CIRCUIT	RMS INPUT (volts)	DC OUTPUT (volts)	DC OUTPUT (amps)
2-240A	25,000	0.5	4.0	150	225	1- ϕ full wave	9,000	8,000	1.0
						1- ϕ Bridge	18,000	16,000	1.0
						3- ϕ full wave	10,200*	24,000	1.5
250R	60,000	0.25	2.5	150	225	1- ϕ full wave	21,000	19,000	0.5
						1- ϕ Bridge	42,000	38,000	0.5
						3- ϕ full wave	24,500*	57,000	0.75
2-450A	30,000	1.0	8.0	450	225	1- ϕ full wave	10,600	9,300	2.0
						1- ϕ Bridge	21,200	18,600	2.0
						3- ϕ full wave	12,250*	28,000	3.0
2-2000A	75,000	0.75	12.0	1200	225	1- ϕ full wave	26,500	23,800	1.5
						1- ϕ Bridge	53,000	47,600	1.5
						3- ϕ full wave	30,600*	71,500	2.25

*Per leg of star (Y) connected secondary



2-450A



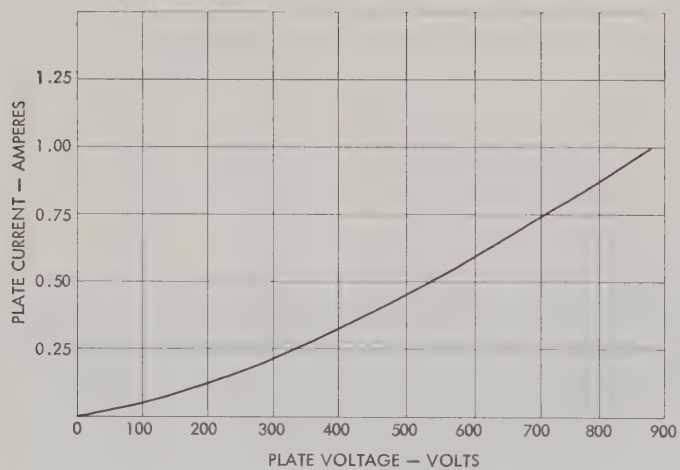
2-2000A

CHARACTERISTICS

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
7.5	12.0	Radiation and Convection	11.2	3.82	10.0	50W Jumbo 4-Pin Bayonet	Johnson 123-211 or National XM-50 --- HR-6 Heat Dissipator
5.0	10.5	Radiation and Convection	10.13	3.82	10.0	50W Jumbo 4-Pin Bayonet	Johnson 123-211 or National XM-50 --- HR-6 Heat Dissipator
7.5	25.0 to 28.0	Radiation and Convection	13.625	4.625	2.4 lb.	4-Pin Metal Shell	Johnson 124-214
10.0	25.0	Convection	17.8	8.13	3.0 lb.	Special 4-Pin	Johnson 124-214 --- HR-8 Heat Dissipator

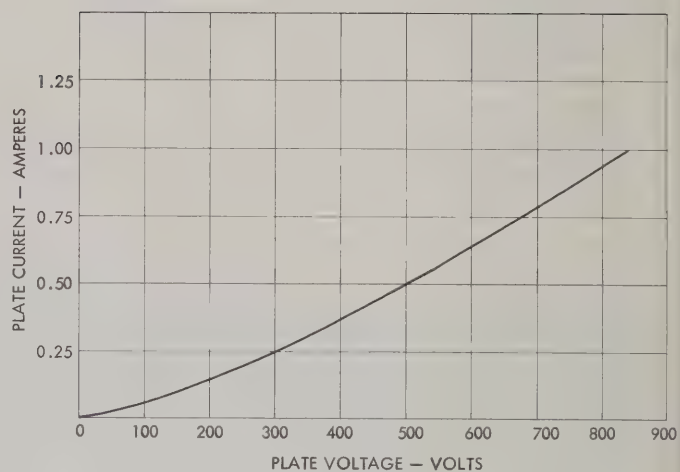
**TYPICAL
PLATE
CHARACTERISTICS**

2-25A



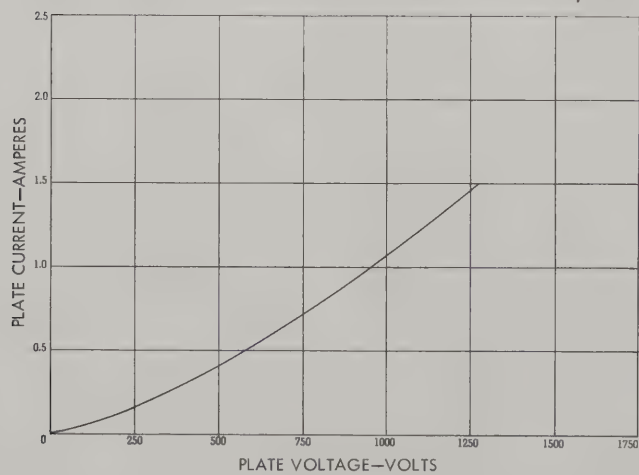
**TYPICAL
PLATE
CHARACTERISTICS**

2-50A



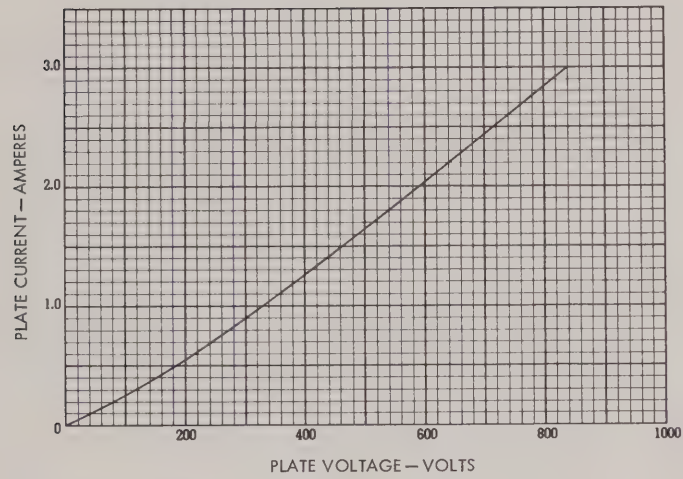
**TYPICAL
PLATE
CHARACTERISTICS**

8020/100R



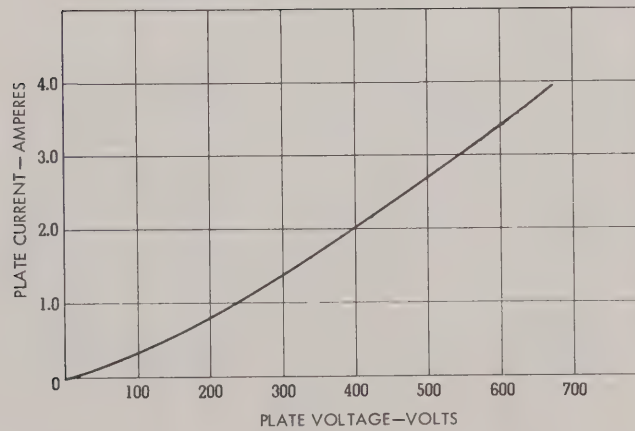
**TYPICAL
PLATE
CHARACTERISTICS**

2-150D



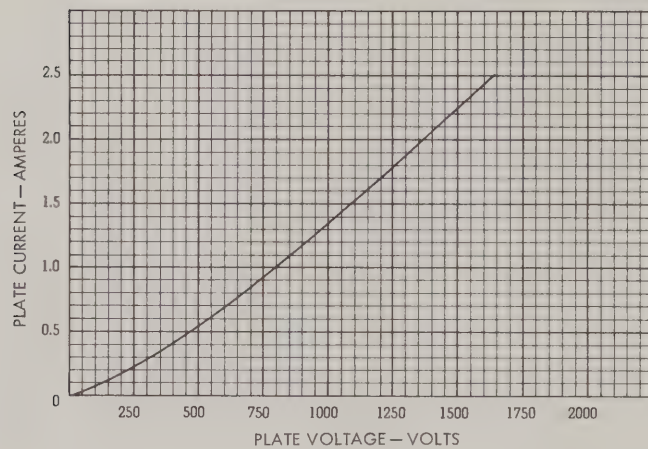
**TYPICAL
PLATE
CHARACTERISTICS**

2-240A



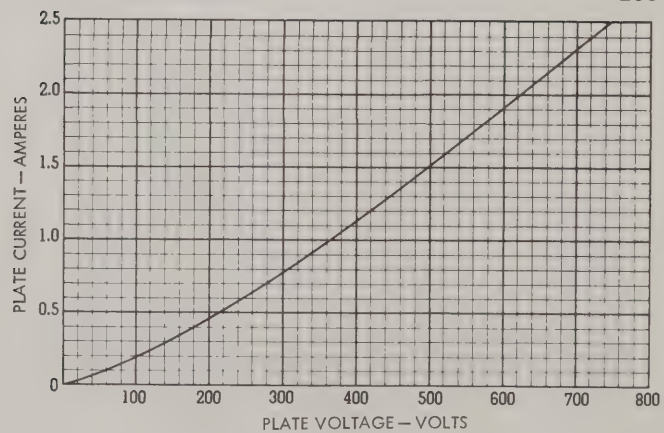
**TYPICAL
PLATE
CHARACTERISTICS**

250R



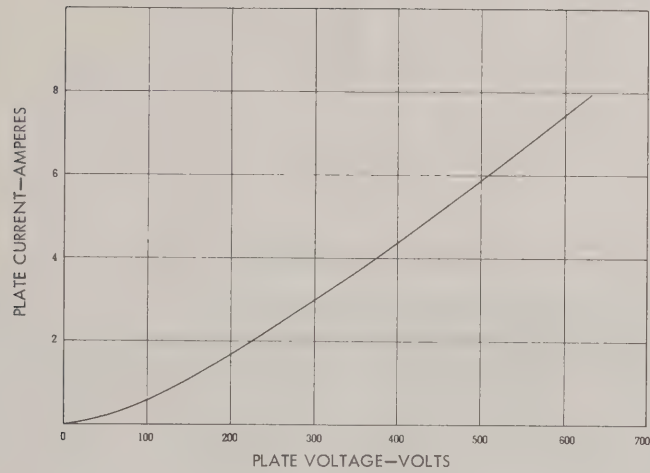
**TYPICAL
PLATE
CHARACTERISTICS**

253



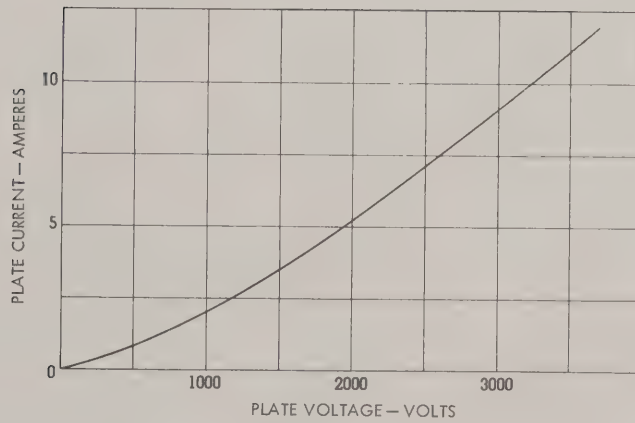
TYPICAL
PLATE
CHARACTERISTICS

2-450A

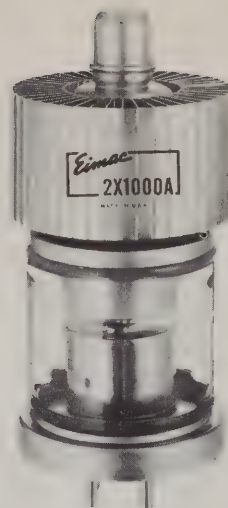


TYPICAL
PLATE
CHARACTERISTICS

2-2000A



EXTERNAL ANODE



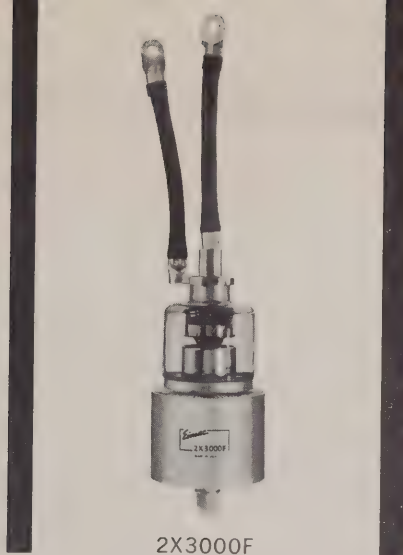
2X1000A

PERFORMANCE DATA

MAXIMUM RATING						MAXIMUM PERFORMANCE CAPABILITIES (PULSE CLIPPER DIODE SERVICE)		
TUBE TYPE	PEAK INVERSE VOLTAGE (volts)	DC CURRENT (amps)	PEAK CURRENT (amps)	PLATE DISS (watts)	SEAL TEMP (°C)	CIRCUIT	PULSE DURATION (pF)	DUTY (%)
2X1000A	25,000	1.25	25.0	1000	150	Thyatron Modulator Shunt Diode	2.0	0.1

						(CHOKE-INPUT FILTER)			
						CIRCUIT	RMS INPUT (volts)	DC OUTPUT (volts)	DC OUTPUT (amps)
2X3000F	25,000	3.0	20.0	3000	175	1- ϕ full wave	8,850	8,000	6.0
						1- ϕ Bridge	17,700	16,000	6.0
						3- ϕ full wave	10,200*	24,000	9.0

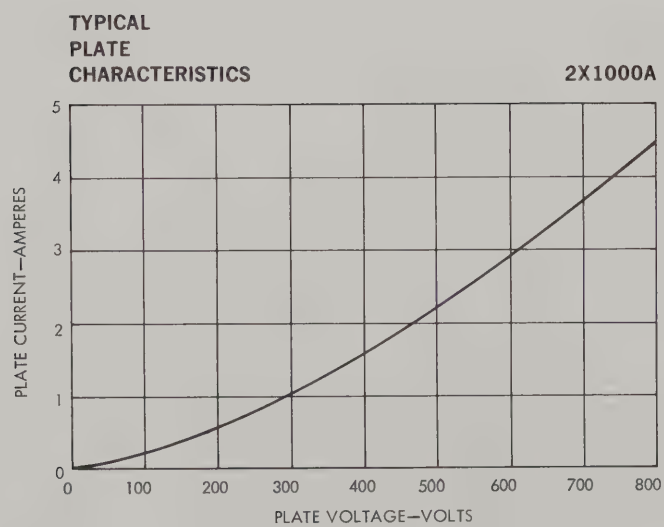
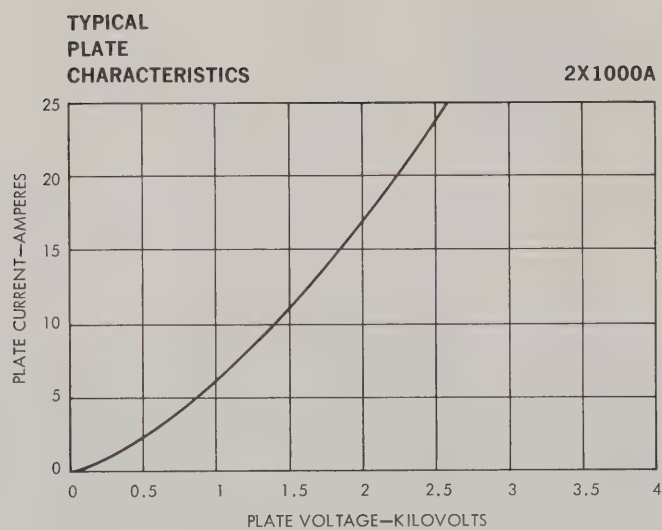
*Per leg of star (Y) connected secondary



2X3000F

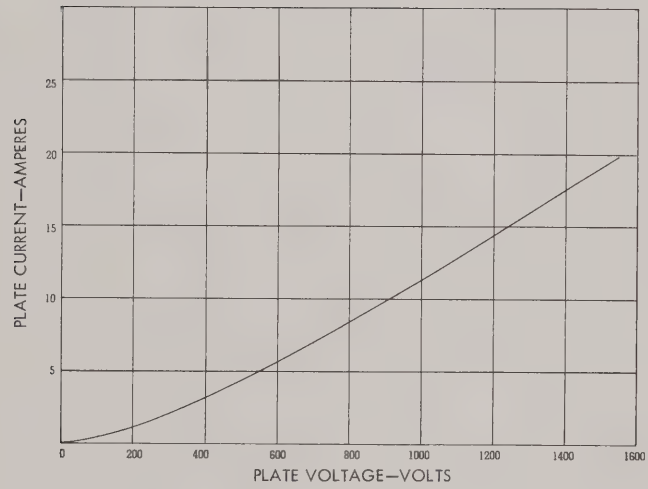
CHARACTERISTICS

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
26.5	22.5	Forced-Air	7.188	3.125	25.5	Super Jumbo 4-Pin	Johnson 122-244
7.5	51.0	Forced-Air	8.375	4.125	5.7 lb.		—

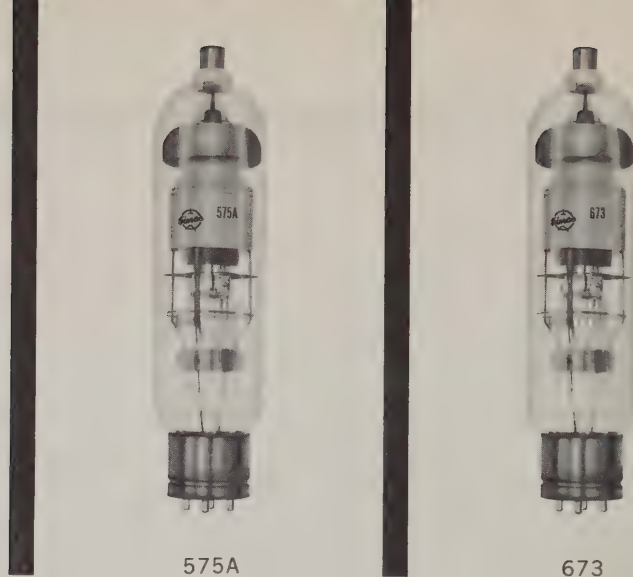


**TYPICAL
PLATE
CHARACTERISTICS**

2X3000F



MERCURY VAPOR



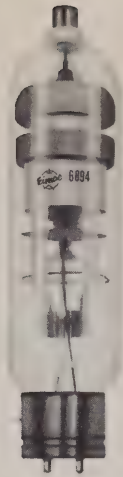
PERFORMANCE DATA

TUBE TYPE	MAXIMUM RATING					MAXIMUM PERFORMANCE CAPABILITIES (CHOKE-INPUT FILTER)			
	PEAK INVERSE VOLTAGE (volts)	DC CURRENT (amps)	PEAK CURRENT (amps)	SUPPLY FREQUENCY (cps)	CONDENSED-MERCURY TEMP (°C)	CIRCUIT	RMS INPUT (volts)	DC OUTPUT (volts)	DC OUTPUT (amps)
575A	15,000	2.5	10.0	150	20-50	1- ϕ full wave	5,300	4,750	5.0
						1- ϕ Bridge	10,600	9,500	5.0
						3- ϕ full wave	6,100	14,250	7.5
673	15,000	2.5	10.0	150	20-50	1- ϕ full wave	5,300	4,750	5.0
						1- ϕ Bridge	10,600	9,500	5.0
						3- ϕ full wave	6,100	14,250	7.5
869B/BL	15,000	5.0	20.0	150	30-50	1- ϕ full wave	7,000	6,250	10.0
						1- ϕ Bridge	14,000	12,500	10.0
						3- ϕ full wave	8,150	19,000	15.0
6894	20,000	2.5	11.5	150	20-50	1- ϕ full wave	7,000	6,250	5.0
						3- ϕ Bridge	14,000	12,500	5.0
						1- ϕ full wave	8,150	19,000	7.5
6895	20,000	2.5	11.5	150	20-50	1- ϕ full wave	7,000	6,250	5.0
						1- ϕ Bridge	14,000	12,500	5.0
						3- ϕ full wave	8,150	19,000	7.5
RX21A	11,000	0.75	3.0	150	20-60	1- ϕ full wave	3,900	3,500	1.5
						1- ϕ Bridge	7,800	7,000	1.5
						3- ϕ full wave	4,500*	10,500	2.25

* Two tubes



869B



6894



6895



RX21A

CHARACTERISTICS

CHARACTERISTICS

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
5.0	9.0 to 11.5	11.125	2.563	12.0	50W A4-29	Johnson 123-211
5.0	9.0 to 11.5	11.438	2.563	12.0	Industrial A4-18	Johnson 123-206
5.0	17.0 to 21.0	14.438	3.0	20.0	A3-20	869B Johnson 124-215 869BL-None
5.0	9.0 to 11.0	10.531	2.563	4.0	50W A4-29	Johnson 123-211
5.0	9.0 to 11.0	10.531	2.563	4.0	Industrial A4-18	Johnson 123-206
2.5	10.0	8.0	2.063	4.0	Medium 5-Pin A5-11	Johnson 122-225

GRID CONTROLLED



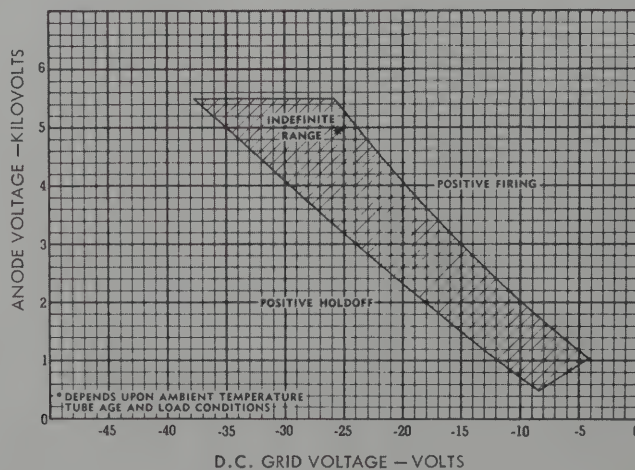
KY21A

PERFORMANCE DATA

MAXIMUM RATING						MAXIMUM PERFORMANCE CAPABILITIES (CHOKE-INPUT FILTER)			
TUBE TYPE	PEAK INVERSE VOLTAGE (volts)	DC CURRENT (amps)	PEAK CURRENT (amps)	SUPPLY FREQUENCY (cps)	CONDENSED- MERCURY TEMP (°C)	CIRCUIT	RMS INPUT (volts)	DC OUTPUT (volts)	DC OUTPUT (amps)
KY21A	11,000	0.75	3.0	150	20-60	1- ϕ full wave	3,900	3,500	1.5
						1- ϕ Bridge	7,800	7,000	1.5
						3- ϕ full wave	4,500*	10,500	2.25

TYPICAL CONTROL CHARACTERISTICS

KY21A



*Per leg of star (Y) connected secondary

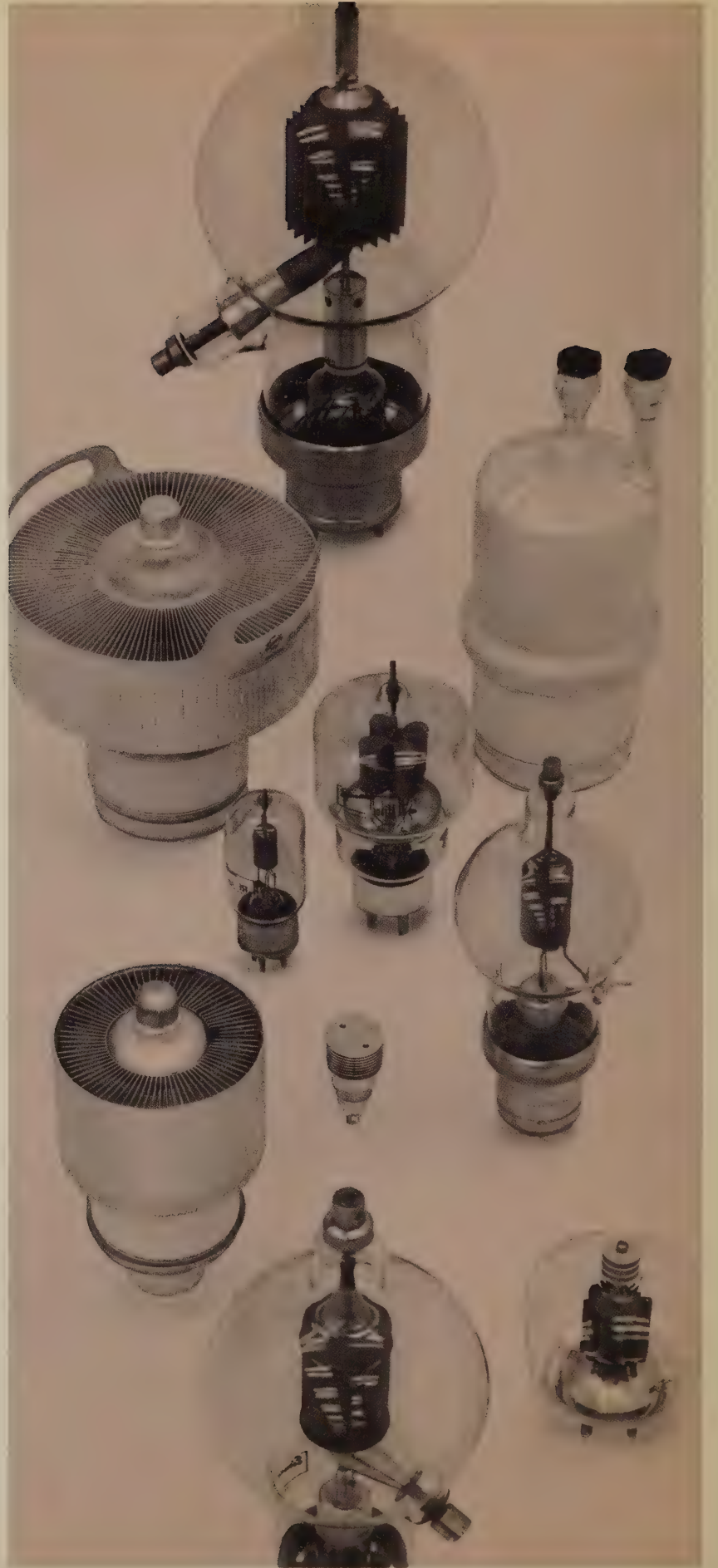
CHARACTERISTICS

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
2.5	10.0	8.0	2.063	4.0	Medium 5-Pin A5-11	Johnson 122-225

NOTES:

TRIODES

TRIODES



TRIODES

The following brief descriptions cover unique characteristics of Triodes designed for specific applications.

These data should be used as aids in systems design where tube requirements are generally firm.

304TH

A unique medium-mu triode, actually four paralleled triodes in one envelope, often employed in pulse service where high peak currents are demanded.

304TL

A unique low-mu triode, actually four paralleled triodes in one envelope, often employed in pulse service, regulator service, and industrial heating where high peak currents are demanded.

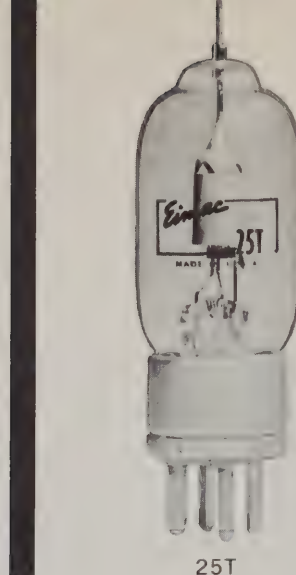
3-400Z

A new zero-bias triode for linear amplifier applications. This tube may be used as a Class B RF amplifier in either the grid-driven or cathode-driven connection, or two 3-400Z's may be used in push-pull as a grid-driven Class B audio amplifier or modulator.

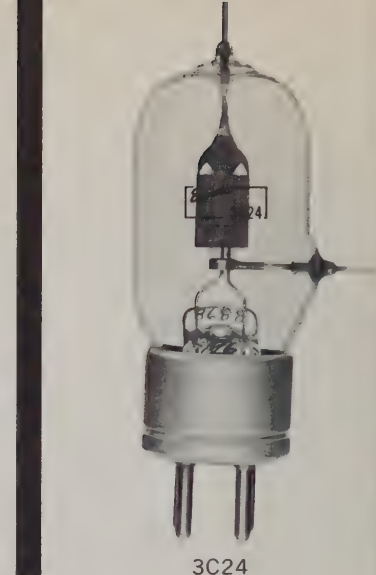
3CPN10A5/7815	A low-duty pulse-rated version of the EIMAC 3CX100A5 with the anode cooler removed. A longer grid-anode ceramic insulator is incorporated, making the tube useful at high altitude. The nominal plate dissipation rating is 10 watts but may be increased if sufficient cooling is provided.
3CPX100A5/7815R	A high-duty version of the 3CPN10A5/7815.
3CX100A5/7289	A ceramic-metal planar UHF triode which supersedes all tubes in the 2C39A family. Narrow mechanical tolerances plus exacting electrical testing assure tube-to-tube uniformity.
3CX1000A7	This zero-bias triode features ceramic-metal construction and a mesh thoriated-tungsten filament.
3CX2500A3	An all ceramic and metal, medium-mu, external anode transmitting triode. This tube features a high power output as an amplifier, oscillator or modulator when operated at relatively low plate voltages.
3CW5000A3	A water-cooled version of the 3CX2500A3.
3CX3000A1	A ceramic-metal low-mu power triode for audio amplifier or modulator service.
3CW5000F1	A water-cooled version of the 3CX3000F1.
3CX3000A7	A zero-bias triode for Class B linear amplifier applications. Operation with zero grid bias offers circuit simplicity by eliminating the bias supply. Power gain is high as a cathode driven amplifier.
3CX5000H3	A medium-mu, ceramic-metal power triode for use as a Class C RF Industrial Oscillator. The grid structure is rated at 150 watts making this tube an excellent choice for severe application.

3CW10,000H3	A medium-mu, water-cooled, ceramic-metal power triode for use in industrial radio-frequency heating services. Its water-cooled anode is conservatively rated at 10 kilowatts of plate dissipation with low water flow and pressure drop.
3CX10,000H3	A medium-mu, air-cooled, ceramic-metal power triode for use in industrial radio-frequency heating services. Its air-cooled anode is rated at 10 kilowatts of plate dissipation.
3CW20,000H3	Designed primarily for industrial RF heating services. The water-cooled anode is conservatively rated at 20 kilowatts of plate dissipation with low water flow and pressure drop.
3CX15,000A3	A medium-mu triode for RF heating service. It is also useful as a linear or plate-modulated RF amplifier.
3CX15,000H3	A medium-mu, ceramic-metal power triode for Class C RF Industrial Oscillator Service. The grid structure is rated at 500 watts making this tube an excellent choice for severe application.
3CW30,000H3	A triode designed for industrial RF heating service. Water-cooled anode is conservatively rated at 30 kilowatts of plate dissipation with low water flow and pressure drop.
3CX20,000H3	An air-cooled, ceramic-metal power triode for use in industrial RF heating service. Its air-cooled anode is rated at 20 kilowatts of plate dissipation.
3CW40,000H3	A medium-mu, ceramic-metal power triode for Class C industrial RF heating services, at frequencies up to 90 MHz. Water-cooled anode is conservatively rated at 40 kilowatts of plate dissipation with low water flow and pressure drop.
3CW100,000H3	A medium-mu, ceramic-metal power triode for use in Class C industrial RF heating services. Upper frequency for full ratings is 30 MHz. Water-cooled anode rated at 100,000 watts.

INTERNAL ANODE



25T

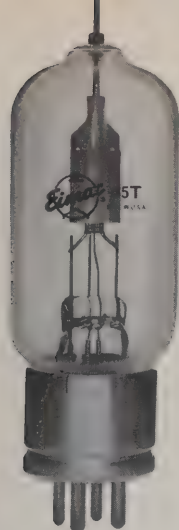


3C24

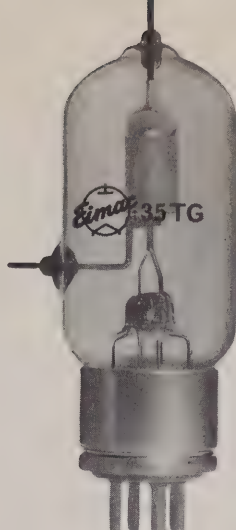
PERFORMANCE DATA

MAXIMUM RATINGS									TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
25T	AB ₂	Audio-Frequency Power Amplifier and Modulator		2000	0.075	25			1250	0.13*	3.4*	112*
	C	Radio-Frequency Power Amplifier and Oscillator	60	2000	0.075	25	7	200	2000	0.063	4.0	100
	C	Plate-Modulated Radio-Frequency Power Amplifier		1600	0.06	17	7		1600	0.053	3.1	68
3C24	AB ₂	Audio-Frequency Power Amplifier and Modulator		2000	0.075	25			1250	0.13*	3.4*	112*
	C	Radio-Frequency Power Amplifier and Oscillator	60	2000	0.075	25	7	200	2000	0.063	4.0	100
	C	Plate Modulated Radio-Frequency Power Amplifier		1600	0.06	17	7		1600	0.053	3.1	68
35T	AB ₂	Audio-Frequency Power Amplifier and Modulator		2000	0.15	50			2000	0.167*	4.0*	235*
	C	Radio-Frequency Power Amplifier and Oscillator	100	2000	0.15	50	15	200	2000	0.125	13.0	200
	C	Plate Modulated Radio-Frequency Power Amplifier		1600	0.12	33	15		1500	0.09	11.0	105
35TG	AB ₂	Audio-Frequency Power Amplifier and Modulator		2000	0.15	50			2000	0.167*	4.0*	235*
	C	Radio-Frequency Power Amplifier and Oscillator	100	2000	0.15	50	15	200	2000	0.125	13.0	200
	C	Plate Modulated Radio-Frequency Power Amplifier		1600	0.12	33	15		1500	0.09	11.0	105

* Two tubes



35T



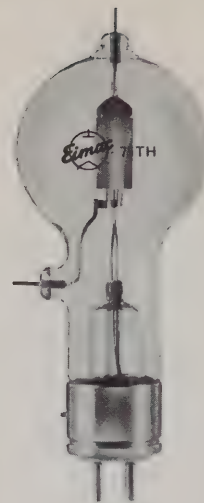
35TG

CHARACTERISTICS

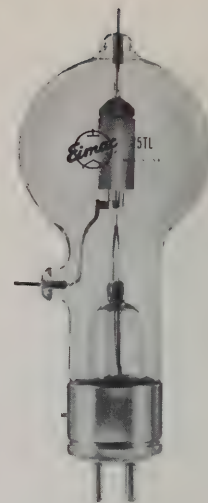
CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE-FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/CHIMNEY
6.3	3.0	1.95 to 2.75	1.3 to 1.7	0.1 to 0.3	4.38	1.44	1.5	Radiation and Convection	Small 4-Pin A4-5	Johnson 122-244 or National XC4 or CIR-4
6.3	3.0	1.4 to 2.2	1.4 to 1.8	0.1 to 0.3	4.375	1.438	1.5	Radiation and Convection	Small 4-Pin	Johnson 122-244 or National XC4 or CIR-4
5.0	3.6 to 4.2	3.0 to 5.0	1.4 to 2.2	0.08 to 0.23	5.5	1.8	2.5	Radiation and Convection	Medium 4-Pin	Johnson 122-244 or National XC4 or CIR-4
5.0	3.6 to 4.2	2.0 to 3.2	1.25 to 2.05	0.1 to 0.35	5.5	1.8	2.5	Radiation and Convection	Medium 4-Pin	Johnson 122-244 or National XC4 or CIR-4

INTERNAL ANODE



75TH

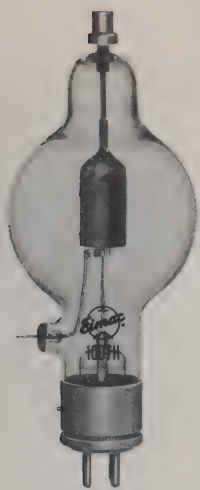


75TL

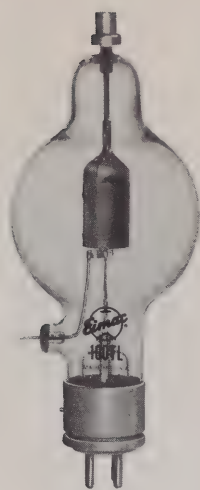
PERFORMANCE DATA

MAXIMUM RATINGS								TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
75TH	B	Audio-Frequency Power Amplifier and Modulator		3000	0.225	75	16		2000	0.225*	3.0	300*
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.225	75	16	200	2000	0.15	10.0	225
	C	Plate-Modulated Radio-Frequency Power Amplifier		2400	0.18	50	16		2000	0.11	6.0	170
75TL	AB ₁	Audio-Frequency Power Amplifier and Modulator		3000	0.225	75	—		2000	0.13*	0.0	110*
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.225	75	13	225	2000	0.15	8.0	225
	C	Plate-Modulated Radio-Frequency Power Amplifier		2400	0.18	50	13		2000	0.13	14.0	210
100TH	AB ₂	Audio-Frequency Power Amplifier and Modulator		3000	0.225	100			2500	0.25*	7.5*	425*
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.225	100	20	200	3000	0.165	18.0	400
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.18	65	20		2500	0.14	17.0	285
100TL	AB ₂	Audio-Frequency Power Amplifier and Modulator		3000	0.225	100			2500	0.25*	10.0*	425*
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.225	100	15	200	3000	0.165	20.0	400
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.18	65	15		2500	0.14	23.0	285

* Two tubes



100TH



100TL

CHARACTERISTICS

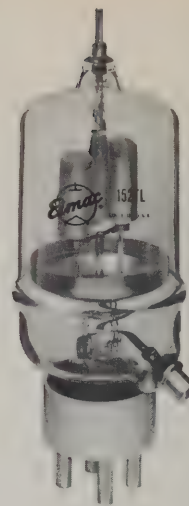
CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE-FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/CHIMNEY
5.0	6.25	2.7	2.3	0.3	7.25	2.81	3.0	Radiation and Convection	Medium 4-Pin Bayonet	Johnson 122-244 or National XC4 or CIR-4
5.0	6.25	2.6	2.4	0.4	7.25	2.81	3.0	Radiation and Convection	Medium 4-Pin Bayonet	Johnson 122-244 or National XC4 or CIR-4
5.0	6.3	2.9	2.0	0.3	7.75	3.187	4.0	Radiation and Convection	Medium 4-Pin Bayonet	Johnson 122-244 or National XC4 or CIR-4
5.0	6.3	2.3	2.0	0.4	7.75	3.187	4.0	Radiation and Convection	Medium 4-Pin Bayonet	Johnson 122-244 or National SC4 or CIR-4

INTERNAL ANODE



152TH

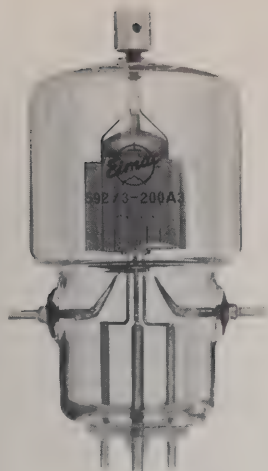


152TL

PERFORMANCE DATA

MAXIMUM RATINGS									TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
152TH	B	Audio-Frequency Power Amplifier and Modulator		3000	0.45	150	30		2500	0.34	8.0	600
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.45	150	30	225	3000	0.25	27.0	600
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.35	100	30		2500	0.2	15.0	400
152TL	B	Audio-Frequency Power Amplifier and Modulator	40	3000	0.45	150	—	225	3000*	0.335	3.0*	700*
	C	Radio-Frequency Power Amplifier and Oscillator		3000	0.45	150	—		3000	0.25	20.0	600
3-200A3 / 592	B	Audio-Frequency Power Amplifier and Modulator		3500	0.25	200	25		3000	0.4*	20.0*	820*
	C	Radio-Frequency Power Amplifier and Oscillator	150	3500	0.25	200	25	175	3500	0.228	15.0	600
	C	Plate-Modulated Radio-Frequency Power Amplifier		2600	0.2	130	25		2500	0.2	19.0	375
250TH	AB ₂	Audio-Frequency Power Amplifier and Modulator		4000	0.35	250	40		3000	0.56*	42.0*	1180*
	C	Radio-Frequency Power Amplifier and Oscillator	40	4000	0.35	250	40	225	4000	0.313	39.0	1000
	C	Plate-Modulated Radio-Frequency Power Amplifier		3200	0.28	165	40		3000	0.2	14.0	435

* Two tubes



3-200A3/
592



250TH

CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0 or 10.0	12.5 or 6.25	5.7	4.8	0.4	7.63	2.57	8.0	Radiation and Convection	Special 4-Pin	Johnson 124-213
5.0 or 10.0	12.5 or 6.25	4.5	4.4	0.7	7.625	2.563	7.0	Radiation and Convection	Special 4-Pin	Johnson 124-213
10.0	5.0	3.6	3.3	0.29	6.0	3.094	6.0	Radiation and Forced-Air	Special	—
5.0	10.5	4.6	2.9	0.5	10.13	3.813	10.0	Radiation and Convection	Special 4-Pin	Johnson 123-211 or National XM-50 —*— Heat Dissipator HR-3 or HR-6

INTERNAL ANODE



250TL

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
250TL	AB ₂	Audio-Frequency Power Amplifier and Modulator		4000	0.35	250			3000	0.5*	16.0*	1000*
	C	Radio-Frequency Power Amplifier and Oscillator	40	4000	0.35	250	35	225	4000	0.31	33.0	1000
	C	Plate-Modulated Radio-Frequency Power Amplifier		3200	0.28	165	35		3000	0.2	11.0	435
304TH	AB ₂	Audio-Frequency Power Amplifier and Modulator		3000	0.9	300			3000	0.665*	14.0*	1400*
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.9	300	60	225	3000	0.5	53.0	1200
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.75	200	60		2500	0.4	29.0	800
304TL	AB ₁	Audio-Frequency Power Amplifier and Modulator		3000	0.9	300			3000	0.444*	0.0	730*
	AB ₂	Audio-Frequency Power Amplifier and Modulator		3000	0.9	300			3000	0.8*	55.0*	1800*
	C	Radio-Frequency Power Amplifier and Oscillator	40	3000	0.9	300	50	200	3000	0.5	40.0	1200
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.7	200	50		2500	0.4	36.0	830

* Two tubes



304TH



304TL

CHARACTERISTICS

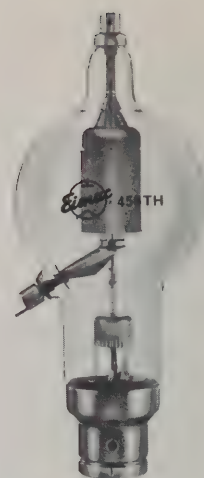
CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0	10.5	3.7	3.0	0.7	10.13	3.813	10	Radiation and Convection	Special 4-Pin	Johnson 123-211 or National XM-50 —*— Heat Dissipator HR-3 or HR-6
5.0 or 10.0	25.0 or 12.5	13.5	10.2	0.7	7.63	3.563	9	Radiation and Convection	Special 4-Pin	Johnson 124-213 —*— Heat Dissipator HR-7 or HR-6
5.0 or 10.0	25.0 or 12.5	12.1	8.6	0.8	7.625	3.563	9	Radiation and Convection	Special 4-Pin	Johnson 124-213 —*— Heat Dissipator HR-6 or HR-7

INTERNAL ANODE



5867A



450TH

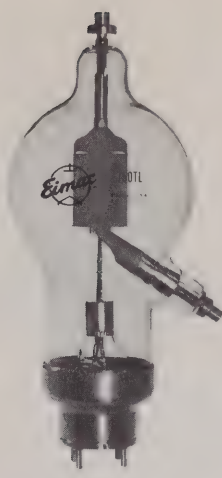
PERFORMANCE DATA

MAXIMUM RATINGS									TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX. RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
5867A	C	Radio-Frequency Power Amplifier or Oscillator		4000	0.4	350	30		4000	0.38 *	40.0 *	1200 *
	C	Oscillator, Industrial Application single phase, full wave rectifier, unfiltered	50	3800	0.36	350	30	220	3500	0.325 *	—	1100 *
	C	Oscillator, Industrial application self-rectified		4500	0.21	350	30		4000	0.19	5 *	630
450TH	AB ₂	Audio-Frequency Power Amplifier and Modulator		6000	0.6	450			5000	0.62 *	20.0 *	2200 *
	C	Radio-Frequency Power Amplifier and Oscillator	40	6000	0.6	450	80	200	5000	0.45	46.0	1800
	C	Plate-Modulated Radio-Frequency Power Amplifier		4500	0.5	300	80		4500	0.345	29.0	1250
450TL	AB ₂	Audio-Frequency Power Amplifier and Modulator		6000	0.6	450			5000	0.62 *	28.0 *	2200 *
	C	Radio-Frequency Power Amplifier and Oscillator	40	6000	0.6	450	65	200	5000	0.45	42.0	1800
	C	Plate-Modulated Radio-Frequency Power Amplifier		4500	0.5	300	65		4500	0.345	36.0	1250
750TL	AB ₂	Audio-Frequency Power Amplifier and Modulator		10,000	1.0	750	100		6000	0.834 *	46.0 *	3500 *
	C	Radio-Frequency Power Amplifier and Oscillator	40	10,000	1.0	750	100	225	6000	0.625	125.0	3000
	C	Plate-Modulated Radio-Frequency Power Amplifier		8000	0.8	500	100		6000	0.415	75.0	2000

* Two tubes



450TL



750TL

CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE-FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/CHIMNEY
5.0	14.7	6.5 to 8.0	5.0 to 6.2	0.5	5.875	3.438	6.0	Radiation and Forced-Air	5-Pin	Eimac SK-410 Eimac SK-406
7.5	12.0	8.8	5.0	0.8	12.625	5.125	1.3 lb.	Radiation and Convection	Special 4-Pin	Johnson 123-211 or National XM-50
7.5	12.0	6.8	4.5	0.8	12.625	5.125	1.3 lb.	Radiation and Convection	Special 4-Pin	Johnson 123-211 or National XM-50
7.5	20.0 to 22.7	7.0 to 10.0	5.0 to 7.0	0.9 to 1.5	17.0	7.13	2.9 lb.	Convection	Special 4-Pin	Johnson 124-214 Heat Dissipator HR-8

INTERNAL ANODE

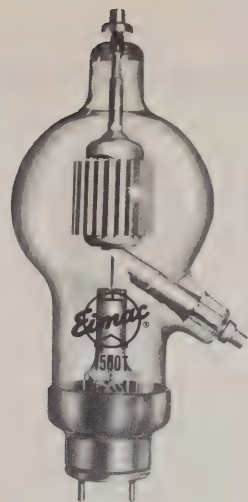


1000T

PERFORMANCE DATA

			MAXIMUM RATINGS						TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
1000T	C	Radio-Frequency Power Amplifier and Oscillator		7500	0.75	1000	80		6000	0.667	60.0	3000
	AB ₂	Audio-Frequency Power Amplifier or Modulator	50	7500	0.75	1000	80	225	6000	0.22	60.0	4600*
	C	Plate-Modulated Radio-Frequency Power Amplifier		6000	0.6	665	80		6000	0.6	75.0	2935
1500T	B	Audio-Frequency Power Amplifier and Modulator		8000	1.25	1500	125		6000	1.65*	115.0*	7000*
	C	Radio-Frequency Power Amplifier and Oscillator	40	8000	1.25	1500	125	225	7000	0.86	85.0	4500
	C	Plate-Modulated Radio-Frequency Power Amplifier		6500	1.0	1000	125		6000	0.665	70.0	3000
2000T	AB ₂	Audio-Frequency Power Amplifier and Modulator		8000	1.75	2000			7000	1.8*	175.0*	8600*
	C	Radio-Frequency Power Amplifier and Oscillator	40	8000	1.75	2000	150	200	7000	1.15	115.0	6000
	C	Plate-Modulated Radio-Frequency Power Amplifier		6000	1.4	1350	150		6000	1.13	225.0	5400

* Two tubes



1500T



2000T

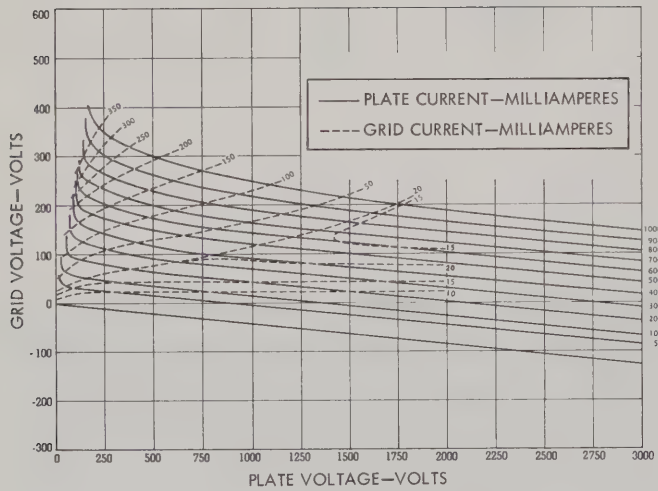
CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	15.5	9.3	5.1	0.5	12.625	5.13	1.25	Radiation and Forced-Air	Special Jumbo 4-Pin	Johnson 123-211
7.5	24.0	9.9	7.2	1.5	17.0	7.13	3.0	Radiation and Forced-Air	Special 4-Pin	Johnson 124-214
10.0	23.5	12.7	8.5	1.7	17.75	8.125	3.5	Radiation and Forced-Air	Special 4-Pin	Johnson 124-214

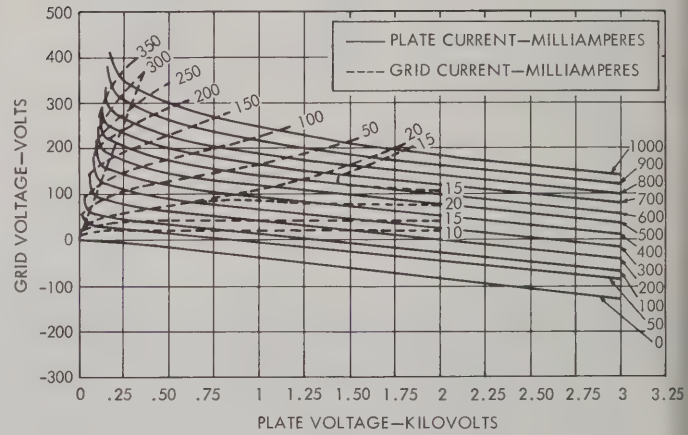
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

25T



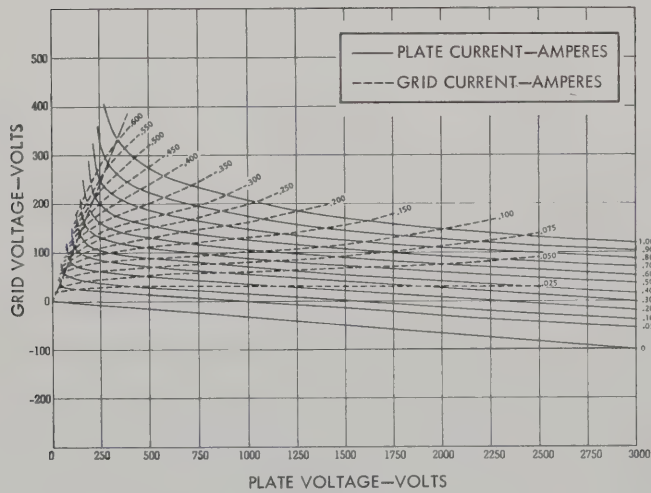
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

3C24



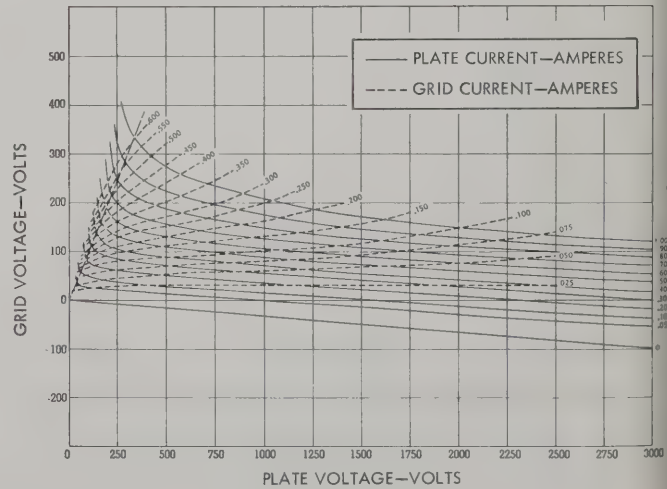
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

35T



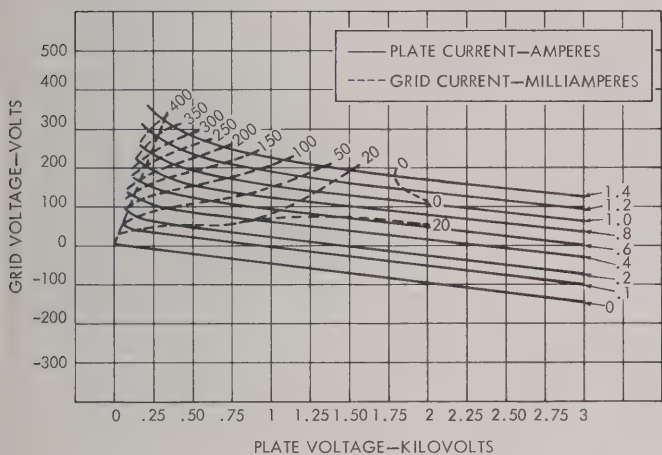
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

35TQ



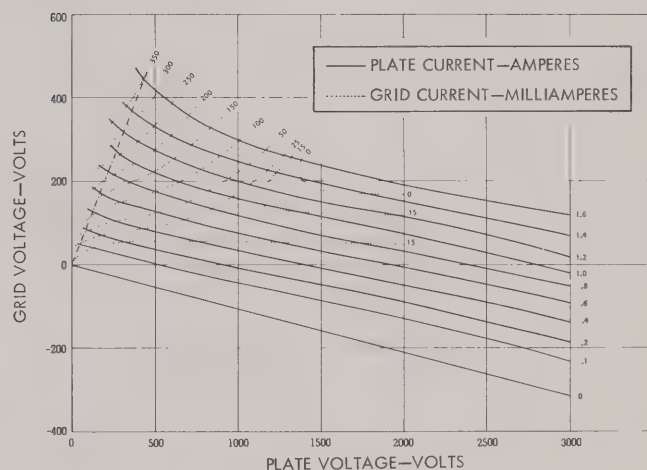
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

75TH



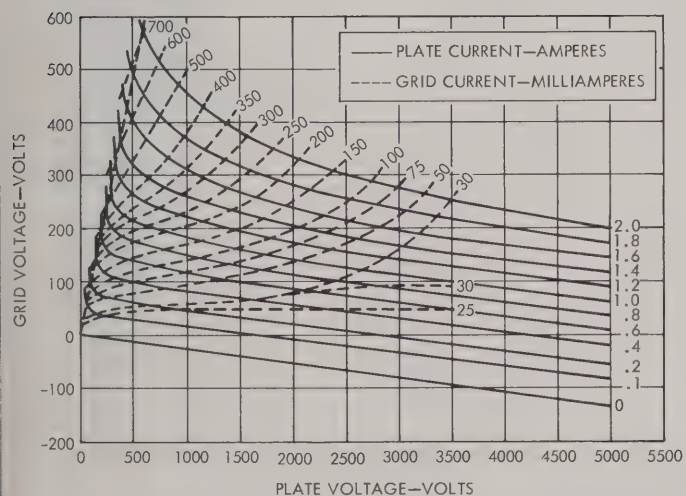
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

75TL



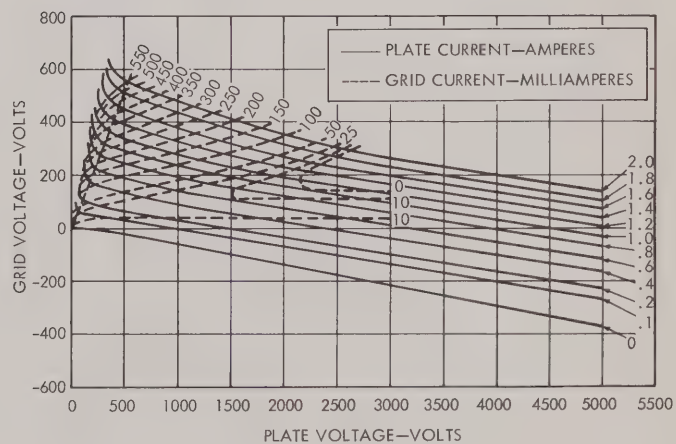
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

100TH



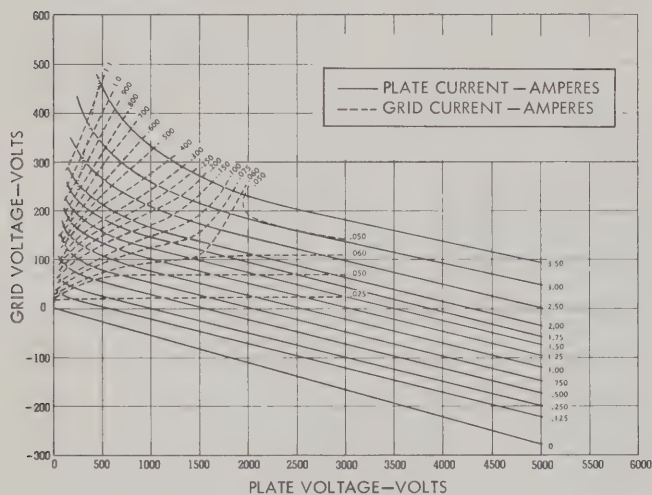
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

100TL



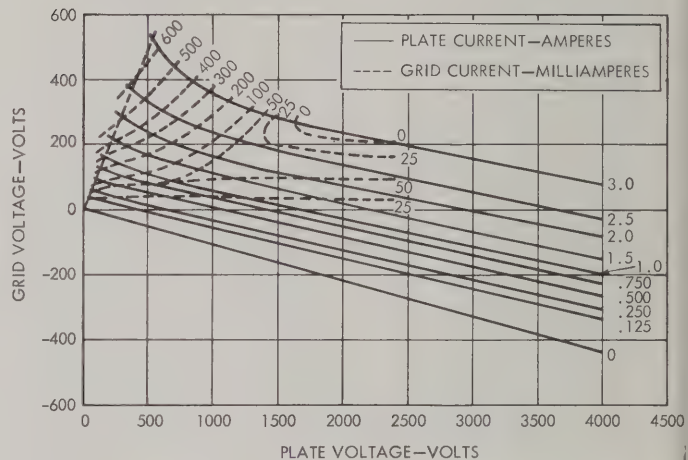
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

152TH



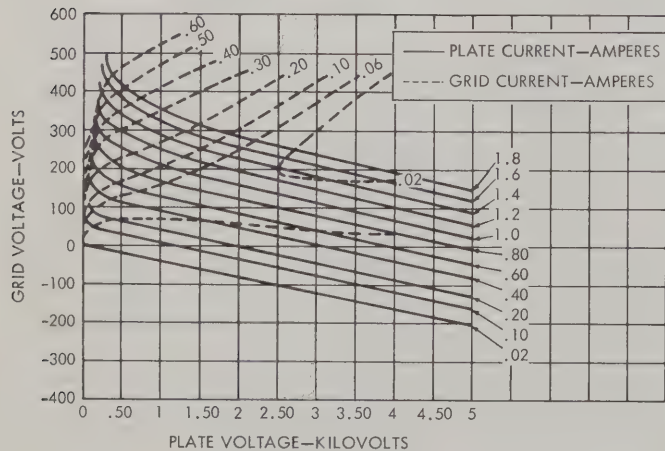
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

152TL



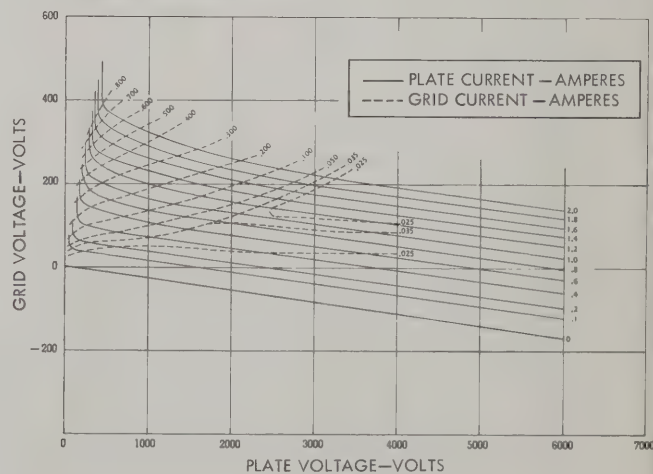
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

3-200A3/592



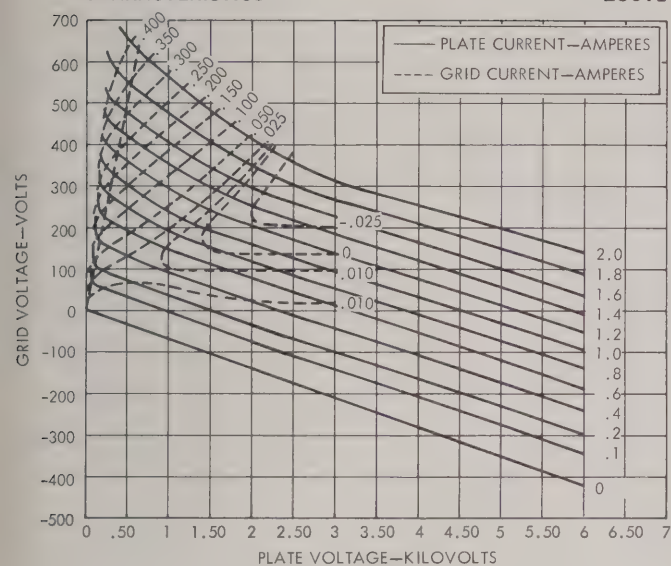
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

250TH



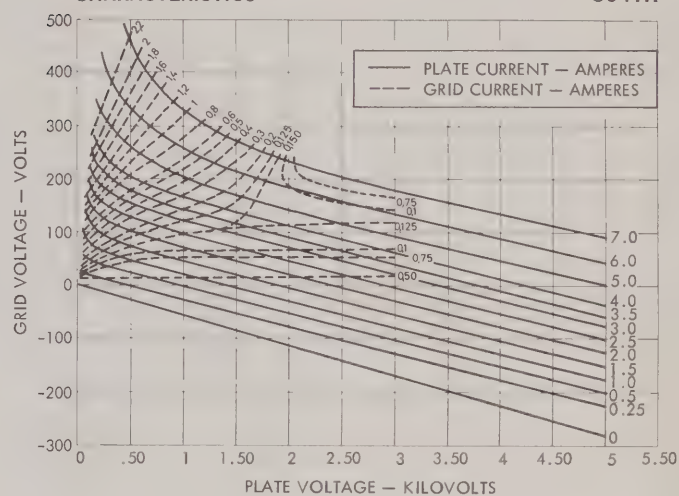
TYPICAL CONSTANT CURRENT CHARACTERISTICS

250TL



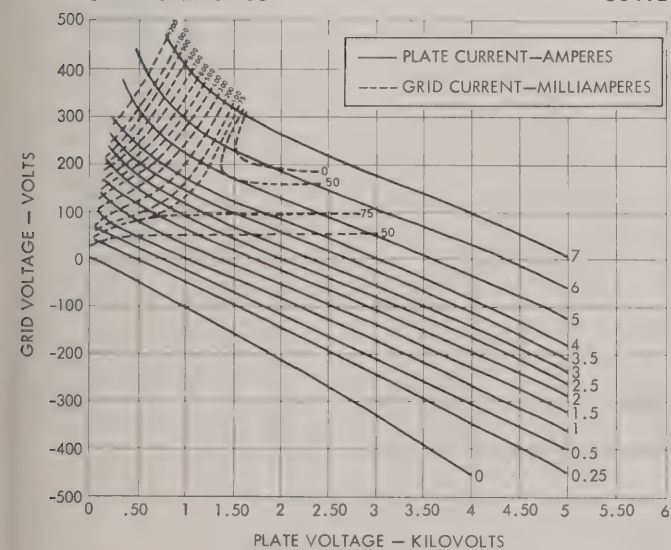
TYPICAL CONSTANT CURRENT CHARACTERISTICS

304TH



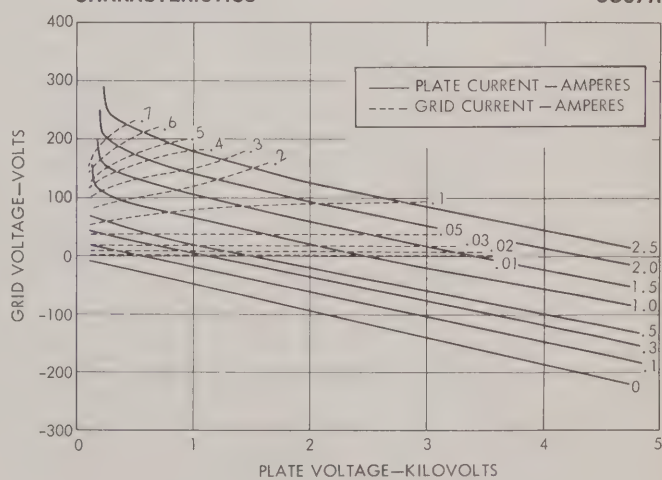
TYPICAL CONSTANT CURRENT CHARACTERISTICS

304TL



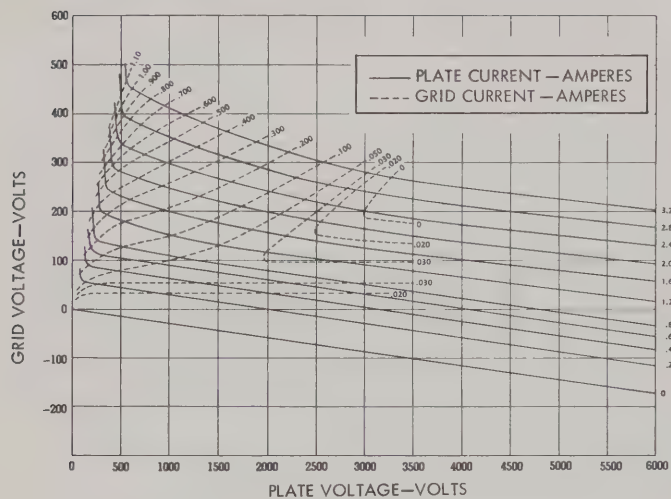
TYPICAL CONSTANT CURRENT CHARACTERISTICS

5867A



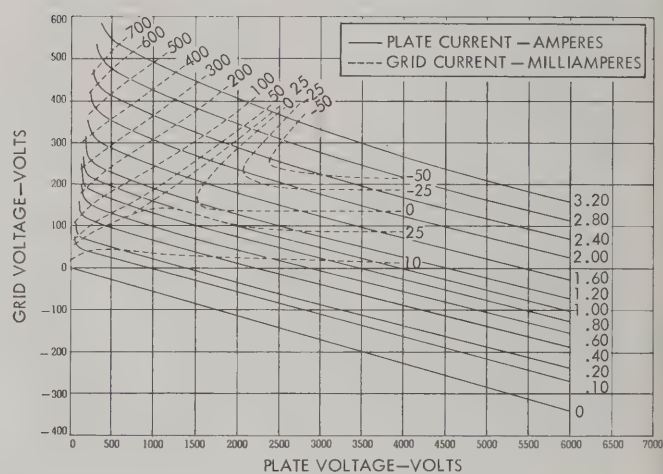
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

450TH



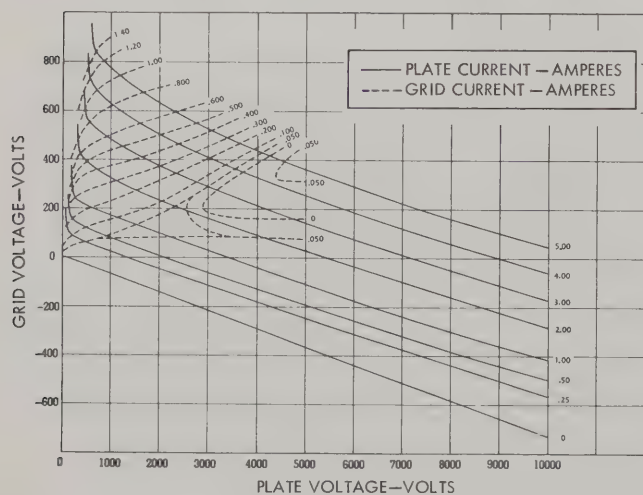
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

450TL



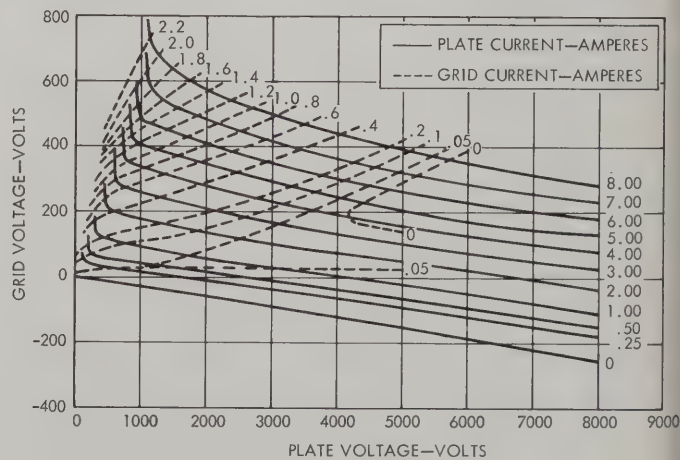
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

750TL



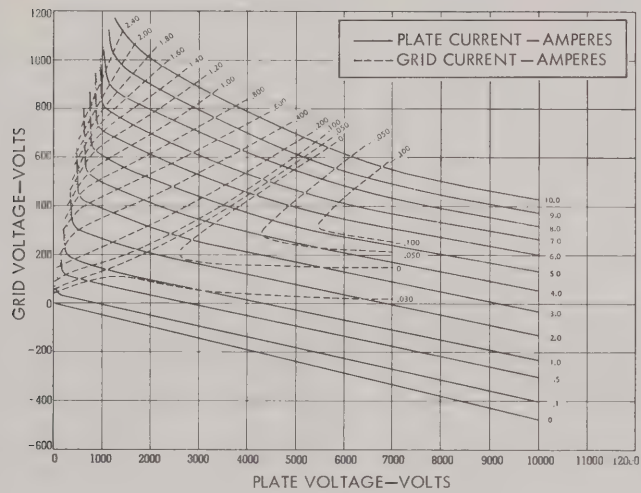
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

1000T



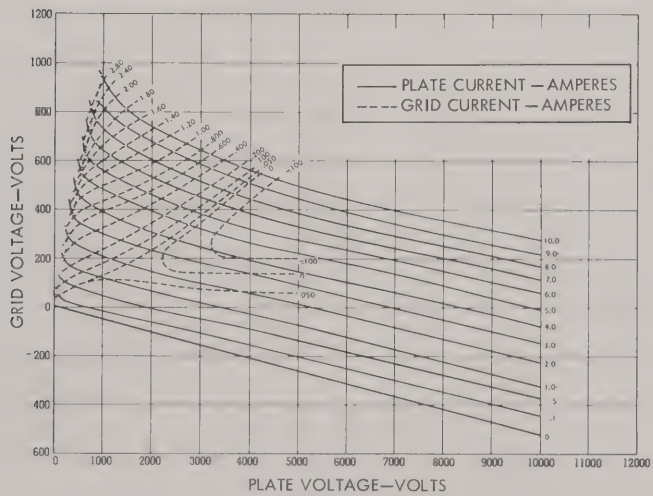
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

1500T



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

2000T



INTERNAL ANODE

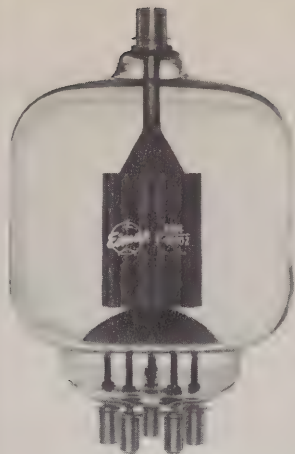


3-400Z/
8163

PERFORMANCE DATA

			MAXIMUM RATINGS						TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3-400Z/ 8163	B	Audio-Frequency Power Amplifier and Modulator	110	3000	0.4	400	20	225	3000	0.666*	26.0*	1310*
	B	Radio-Frequency Linear Power Amplifier-SSB Grounded-Grid		3000	0.4	400	20		3000	0.333	32.0	655
	C	Radio-Frequency Power Amplifier and Oscillator		4000	0.35	400	20		3000	0.333	25.0	730
	C	Plate-Modulated Radio-Frequency Power Amplifier		3000	0.275	270	20		3000	0.245	18.0	550
3-1000Z/ 8164	B	Audio-Frequency Power Amplifier and Modulator	110	6000	0.8	1000	50	200	5000	1.0*	28.0*	3560*
	B	Radio-Frequency Linear Power Amplifier-SSB Grounded-Grid		6000	0.8	1000	50		3500	0.75	85.0	1770
	C	Radio-Frequency Power Amplifier and Oscillator		6000	0.7	1000	50		6000	0.7	57.0	3200
	C	Plate-Modulated Radio-Frequency Power Amplifier		4500	0.55	670	50		4500	0.5	35.0	1765
	AB ₂	Audio-Frequency Power Amplifier and Modulator		7500	0.75	1000	80		6000	1.050*	60.0*	4600*

* Two tubes



3-1000Z/
8164

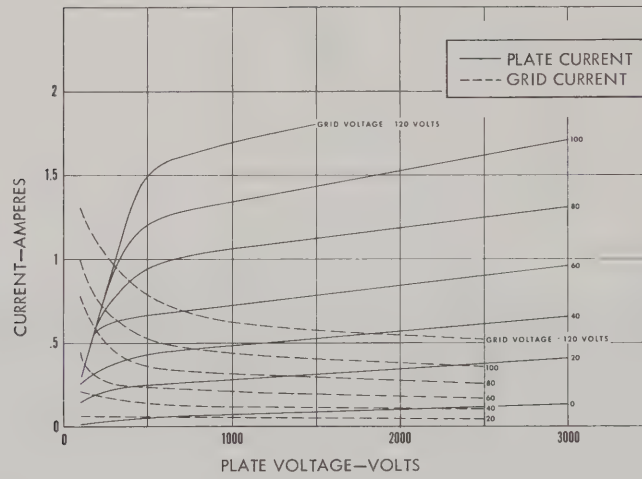
CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0	14.5	7.4	4.1	0.07	5.25	3.57	7.0	Forced-Air	5-Pin	Eimac SK-410
7.5	21.5 to 23.0	19.0	9.0	0.3	7.88	5.25	1.2 lb.	Forced-Air	5-Pin	Eimac SK-510

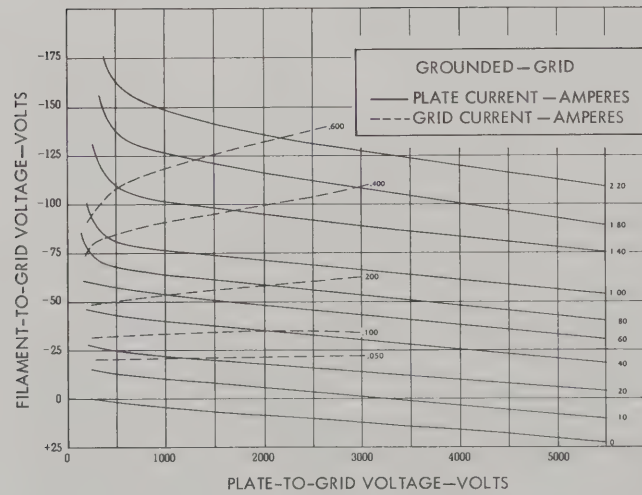
**TYPICAL
PLATE
CHARACTERISTICS**

3-400Z/8163



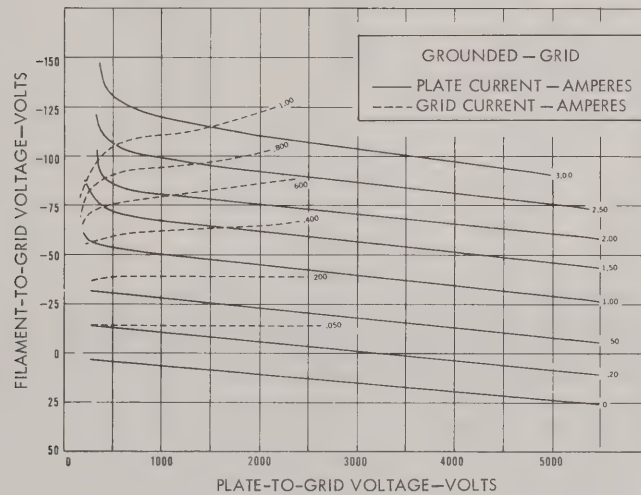
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

3-400Z/8163



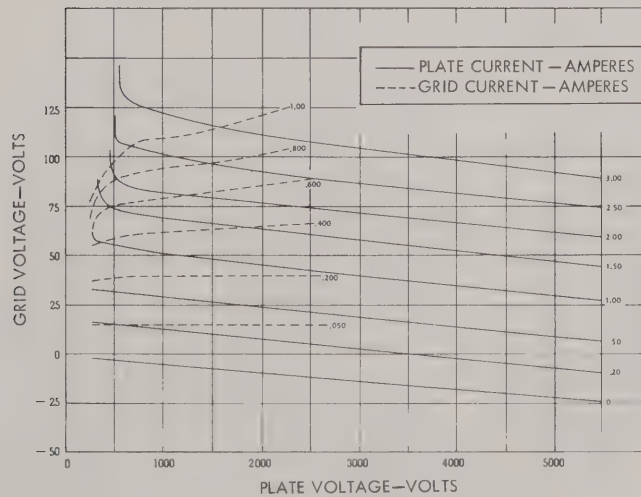
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

3-1000Z/8164

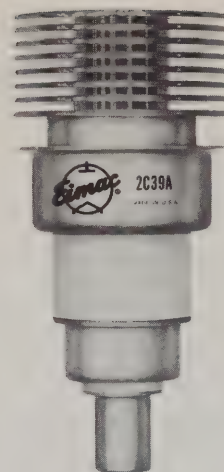


**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

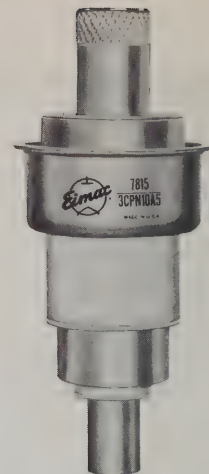
3-1000Z/8164



EXTERNAL ANODE UHF PLANAR



2C39A



3CPN10A5/
7815

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	CATHODE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
2C39A	C	Radio-Frequency Power Amplifier or Oscillator	2500	1000	0.125*	100	2	250	800	0.08	6.0	27
	C	Plate-Modulated Radio-Frequency Amplifier or Oscillator		600	0.1*	70	2		600	0.065	5.0	16
3CPN10A5/7815	C	Plate-Pulsed Power Oscillator	3000	3500	3.0	10	2	250	3500	3.0	DUTY 0.0025	1600
	C	Grid-Pulsed Amplifier	1100	2000	3.0	10	2		1700	1.9	0.001	1500
7698	C	Plate-Pulsed Power Oscillator	3000	3500	5.0	10	2	250	3500	4.8	DUTY 0.0025	2500
	C	Grid-Pulsed Amplifier	1100	2000	5.0	10	2		2000	3.0	0.001	2500
3CPX100A5/7815R	C	Plate-Pulsed Power Oscillator	3000	3500	3.0	100	2	250	3500	3.0	DUTY 0.0025	1600
	C	Grid-Pulsed Amplifier	1100	2000	3.0	100	2		1700	1.9	0.001	1500

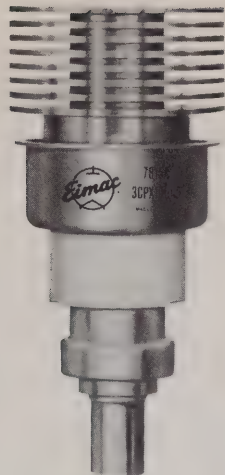
* DC Cathode Current

Collets available from
Instrument Specialties Co.

Cat No. 97-70 plate
97-72 grid
97-74 grid
97-76 cathode/
heater
97-280 heater



7698



3CPX100A5/
7815R

CHARACTERISTICS

CAPACITANCE

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	GRID- CATHODE (pF)	GRID- PLATE (pF)	PLATE- CATHODE (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.3	0.95 to 1.1	5.6 to 7.6	1.86 to 2.16	0.035	2.75	1.27	2.5	Forced-Air	Coaxial	** —
6.0	0.9 to 1.05	5.6 to 7.0	1.86 to 2.1	0.035	2.701	1.195	2.0	Forced-Air	Coaxial	** —
6.3	1.3	8.0	2.25	0.006	2.701	1.195	1.8	Convection	Coaxial	** —
6.0	0.9 to 1.05	5.7 to 7.0	1.86 to 2.1	0.035	2.701	1.264	2.5	Forced-Air	Coaxial	** —



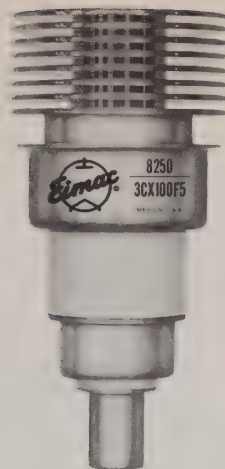
3CX100A5/
7289

EXTERNAL ANODE UHF PLANAR

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	MAXIMUM RATINGS					TYPICAL OPERATION				
			FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	CATHODE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX100A5/ 7289	C	Radio-Frequency Power Amplifier and Oscillator	500	1000	0.125	100	2		800	0.08	6.0	27
	C	Radio-Frequency Power Amplifier and Oscillator	2500	1000	0.125	100	2	250	900	0.09	—	15
	C	Plate-Modulated Radio-Frequency Power Amplifier Grounded Grid	500	600	0.1	70	2		600	0.065	5.0	16
3CX100F5/ 8250	C	Radio-Frequency Power Amplifier and Oscillator	500	1000	0.125	100	2		800	0.08	6.0	27
	C	Radio-Frequency Power Amplifier and Oscillator	2500	1000	0.125	100	2	250	900	0.09	—	15
	C	Plate-Modulated Radio-Frequency Power Amplifier Grounded Grid	500	600	0.1	70	2		600	0.065	5.0	16
7211	C	Radio-Frequency Power Amplifier	500	1000	0.19	100	2		900	0.14	9.0	65
	C	Radio-Frequency Power Amplifier	2500	1000	0.19	100	2	250	900	0.14	—	25

* Collets available from
Instrument Specialties Co.
Cat No. 97-70 plate
97-72 grid
97-74 grid
97-76 cathode/
heater
97-280 heater



3CX100F5/
8250



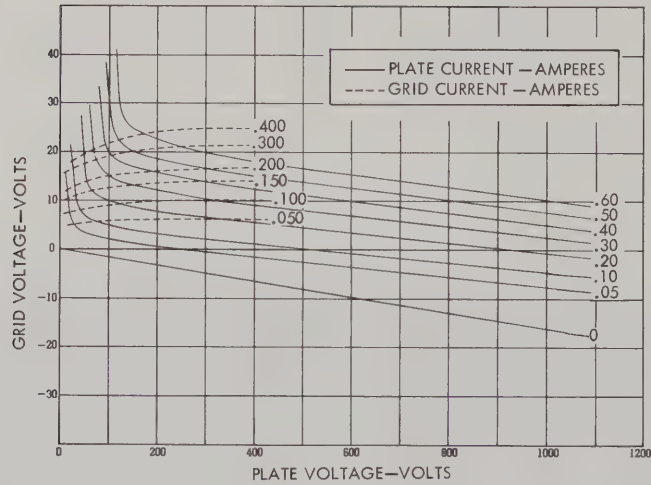
7211

CHARACTERISTICS

CAPACITANCE										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	GRID- CATHODE (pF)	GRID- PLATE (pF)	PLATE- CATHODE (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	0.9 to 1.05	5.6 to 7.0	1.95 to 2.15	0.035	2.701	1.264	2.5	Forced-Air	Coaxial	* —
26.5	0.2 to 0.24	5.6 to 7.0	1.95 to 2.15	0.035	2.701	1.264	2.5	Forced-Air	Coaxial	* —
6.3	1.2 to 1.4	7.0 to 9.0	2.1 to 2.4	0.06	2.701	1.264	2.5	Forced-Air	Coaxial	* —

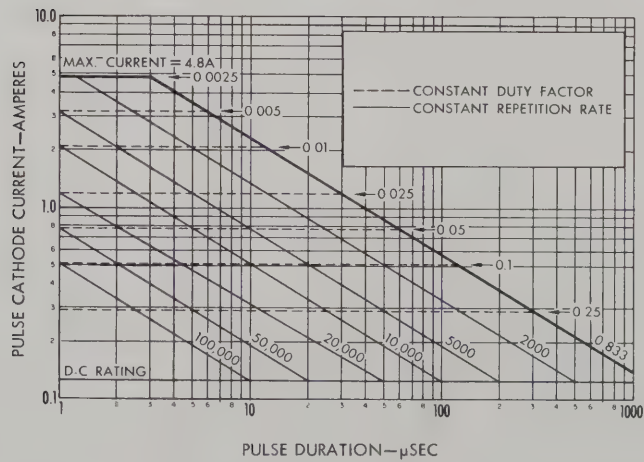
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

2C39A
3CPN10A5/7815
3CPX100A5/7815R
3CX100A5/7289
3CX100F5/8250



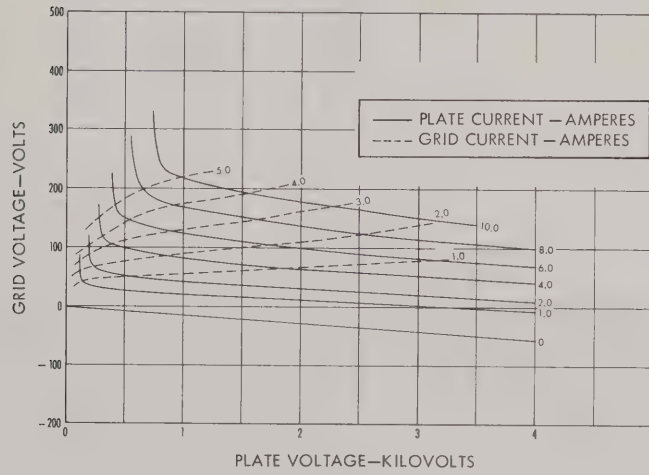
**PULSE CATHODE
CURRENT VS
PULSE LENGTH**

3CPN10A5/7815
3CPX100A5/7815R



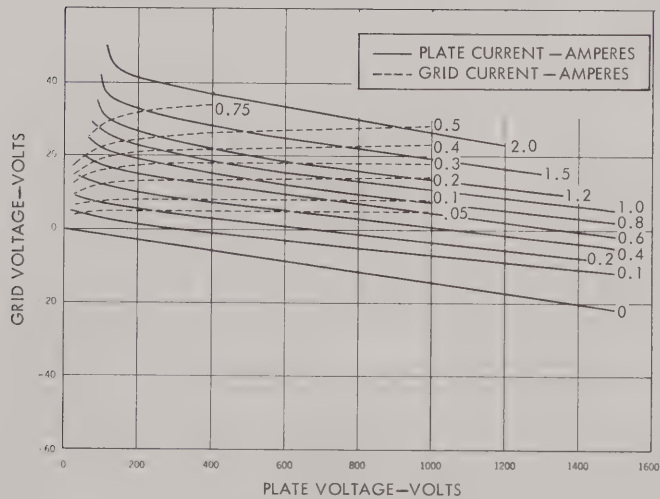
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**3CPN10A5/7815
3CPX100A5/7815R**



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**7698
7211**





EXTERNAL ANODE

3CX1000A7/
8283

PERFORMANCE DATA

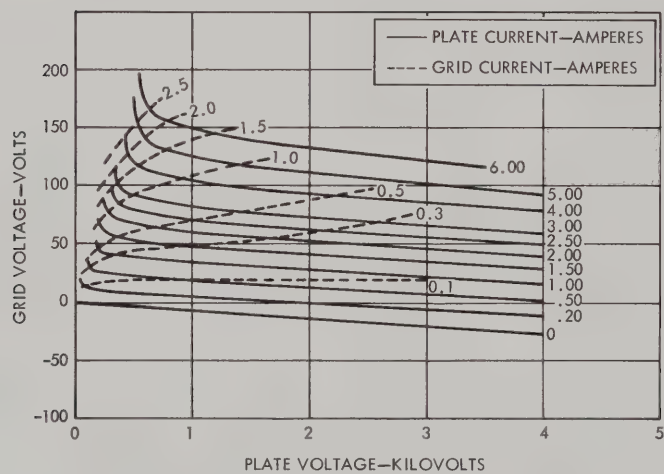
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX1000A7/ 8283	B	Radio-Frequency Linear Power Amplifier, Grounded Grid, SSB		3000	1.0	1000	0.45		2500	0.8	67.0	1200
	B	Audio-Frequency Amplifier or Modulator, Grid Driven	220	3000	1.0	1000	0.45	250	2500	2.0	44.0	2350
	C	RF Amplifier or Oscillator		3000	0.7	1000	0.45		2500	2.0	44.0	2350
	C	Plate Modulated RF Amplifier		2000	0.55	670	0.45		2500	2.0	44.0	2350

CHARACTERISTICS

CAPACITANCE										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0	28.0 to 33.0	29.0 to 35.0	12.0 to 16.0	0.2	4.8	3.38	2.0	Forced-Air	Special Breech- block	Eimac SK-860 or SK-870

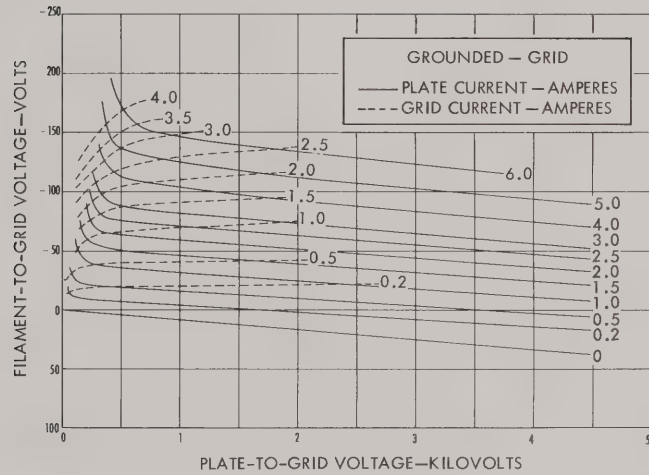
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

3CX1000A7/8283



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

3CX1000A7/8283



EXTERNAL ANODE



3CX2500A3/
8161



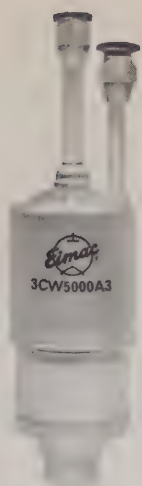
3CX2500F3/
8251

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX2500A3/ 8161	AB or B	Audio-Frequency Power Amplifier or Modulator		6000	2.5	2500	150		6000	3.0	225.0	13,000
	C	Radio-Frequency Power Amplifier and Oscillator	75	6000	2.5	2500	150	250	6000	2.08	136.0	10,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5000	2.0	1670	150		5000	1.25	115.0	5300
3CX2500F3/ 8251	AB or B	Audio-Frequency Power Amplifier or Modulator		6000	2.5	2500	150		6000	3.0	225.0	13,000
	C	Radio-Frequency Power Amplifier and Oscillator	30	6000	2.5	2500	150	250	6000	2.08	136.0	10,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5500	2.0	1670	150		5000	1.25	115.0	5300
3CX2500H3	C	Radio-Frequency Industrial Oscillator	75	6000	2.5	2500	150	250	6000	2.08	136.0	10,000
3CW5000A3	AB ₂	Audio-Frequency Power Amplifier and Modulator		6000	2.5	5000	150		5000	2.26*	59.0*	8000*
	B	Audio-Frequency Power Amplifier and Modulator		6000	2.5	5000	150		6000	3.0*	113.0*	13,000*
	C	Radio-Frequency Power Amplifier and Oscillator	75	6000	2.5	5000	150	175	6000	2.08	136.0	10,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5000	2.0	3350	150		5000	1.45	76.0	5580



3CX2500H3



3CW5000A3

CHARACTERISTICS

CAPACITANCE										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE-FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/CHIMNEY
7.5	49.0 to 54.0	29.2 to 40.2	16.8 to 23.2	0.6 to 1.2	8.6	4.16	6.25	Forced-Air	Coaxial	** —
7.5	48.0 to 53.0	29.2 to 40.2	16.8 to 23.2	0.6 to 1.2	18.0	4.16	7.5	Forced-Air	—	—
7.5	48.0 to 53.0	29.2 to 40.2	16.8 to 23.2	0.6 to 1.2	18.0	4.16	6.5	Forced-Air	—	—
7.5	49.0 to 54.0	29.2 to 40.2	17.8 to 24.2	0.6 to 1.2	12.562	3.625	4.8	Water and Forced-Air	Coaxial	** —

* Two tubes
 ** None, however Collets available from Eimac
 P/N 149575 Inner Filament
 P/N 149576 Outer Filament

EXTERNAL ANODE



3CW5000F3

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CW5000F3	AB ₂	Audio-Frequency Power Amplifier and Modulator	30	6000	2.5	5000	150	175	5000	2.26*	59.0*	8000*
	B	Audio-Frequency Power Amplifier and Modulator		6000	2.5	5000	150		6000	3.0*	113.0*	13,000*
	C	Radio-Frequency Power Amplifier and Oscillator		6000	2.5	5000	150		6000	2.08	136.0	10,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5000	2.0	3350	150		5000	1.45	76.0	5580
3CW5000H3	C	Radio-Frequency Industrial Oscillator	75	6000	2.5	5000	150	250	6000	2.08	136.0	10,000

* Two tubes



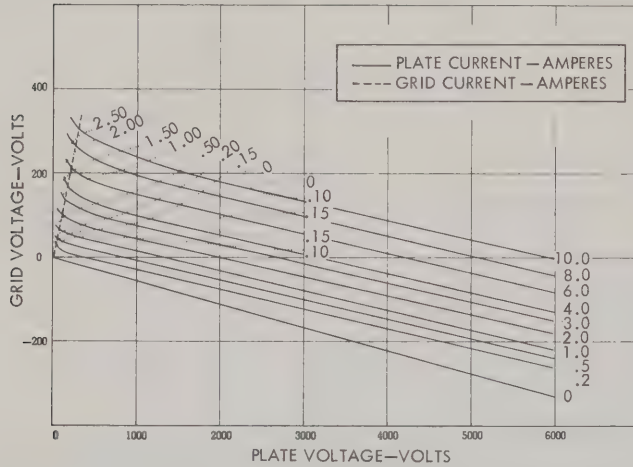
3CW5000H3

CHARACTERISTICS

CAPACITANCE										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	49.0 to 54.0	29.2 to 40.2	17.8 to 24.2	0.6 to 1.2	22.0	3.625	4.8	Water and Forced-Air	—	—
7.5	48.0 to 53.0	29.2 to 40.2	17.8 to 24.2	0.6 to 1.2	18.0	5.42	7.5	Water and Forced-Air	—	—

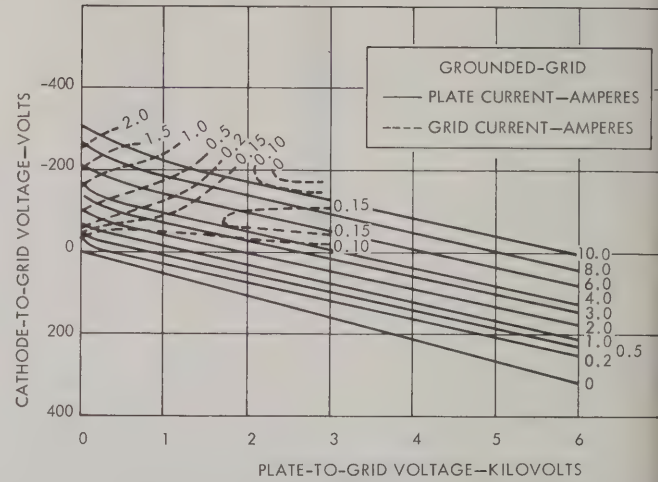
3CX2500A3/8161
3CX2500F3/8251
3CX2500H3
3CW5000A3
3CW5000F3
3CW5000H3

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**



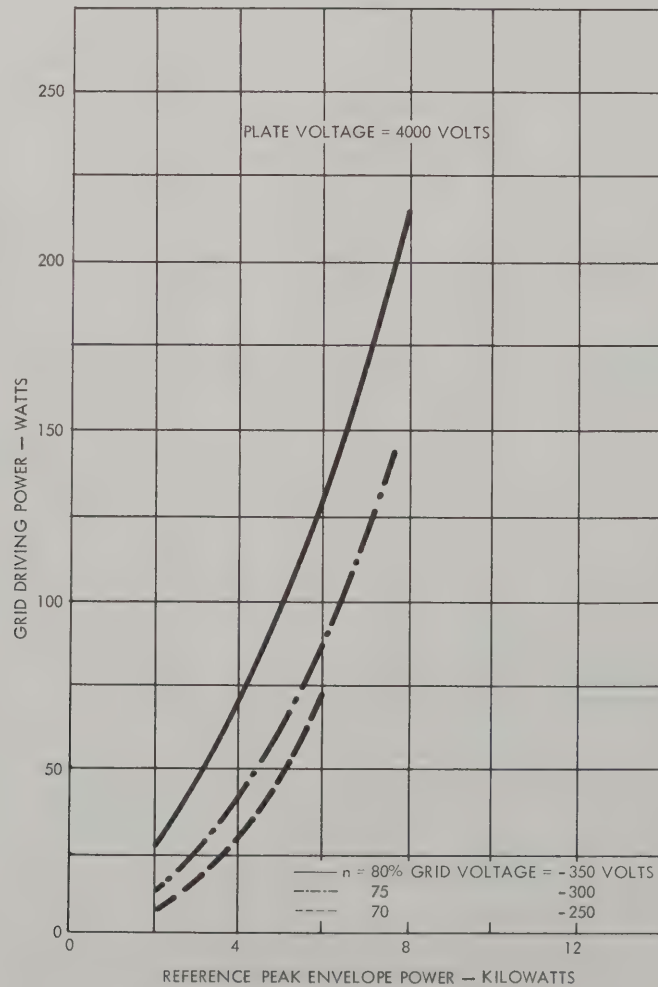
3CX2500A3/8161
3CX2500F3/8251
3CX2500H3
3CW5000A3
3CW5000F3
3CW5000H3

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**



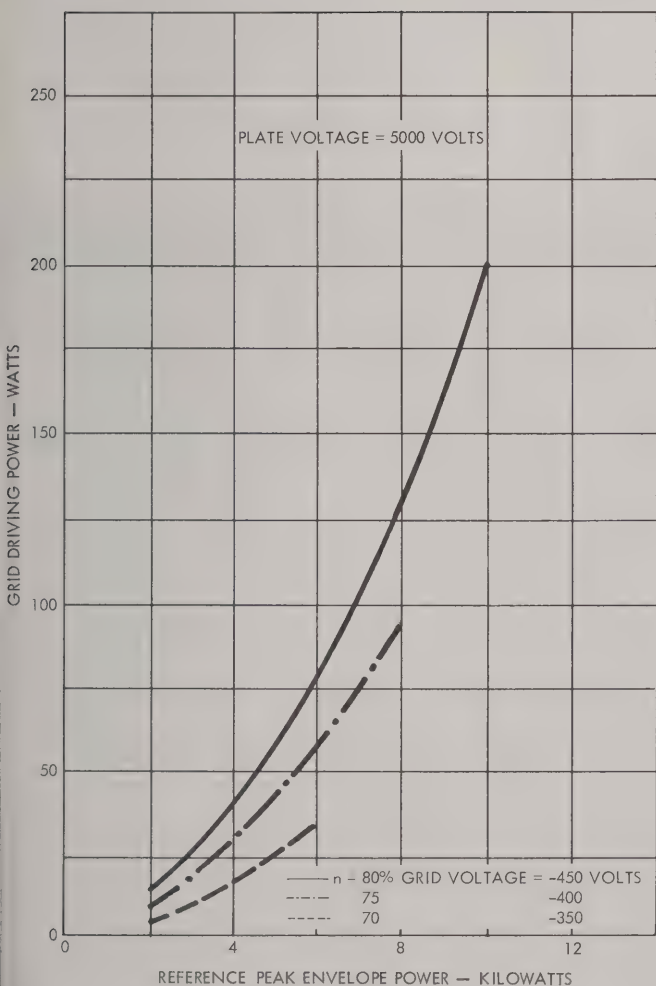
**PLATE OUTPUT
POWER**

3CX2500A3/8161
3CX2500F3/8251
3CW5000A3
3CW5000F3



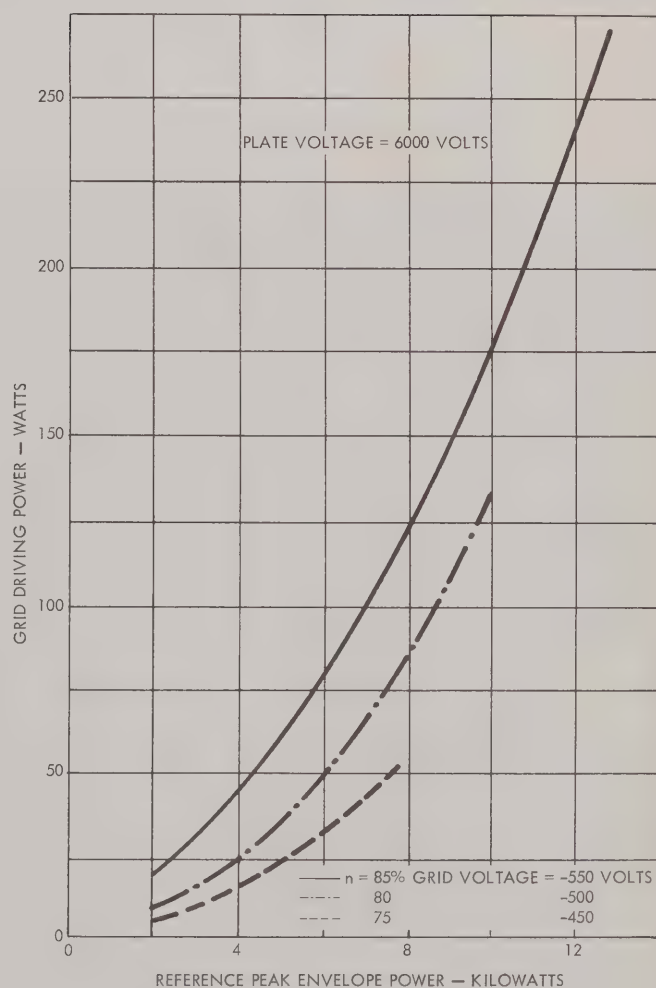
3CX2500A3/8161
3CX2500F3/8251
3CW5000A3
3CW5000F3

PLATE OUTPUT
POWER



3CX2500A3/8161
3CX2500F3/8251
3CW5000A3
3CW5000F3

PLATE OUTPUT
POWER



EXTERNAL ANODE



3CX3000A1



3CX3000F1

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX3000A1	AB ₁	Audio-Frequency Power Amplifier and Modulator	75	6000	2.5	3000	50	250	6000	2.65*	0.0	10,000*
3CX3000F1	AB ₁	Audio-Frequency Power Amplifier and Modulator	30	6000	2.5	3000	50	250	6000	2.65*	0.0	10,000*
3CW5000A1	AB ₁	Audio-Frequency Power Amplifier and Modulator	75	6000	2.5	5000	50	250	6000	2.65*	0.0	10,000*
3CW5000F1	AB ₁	Audio-Frequency Power Amplifier and Modulator	30	6000	2.5	5000	50	250	6000	2.65*	0.0	10,000*

* Two tubes

** None, however Collets available from Eimac
P/N 149575 Inner Filament
P/N 149576 Outer Filament



3CW5000A1



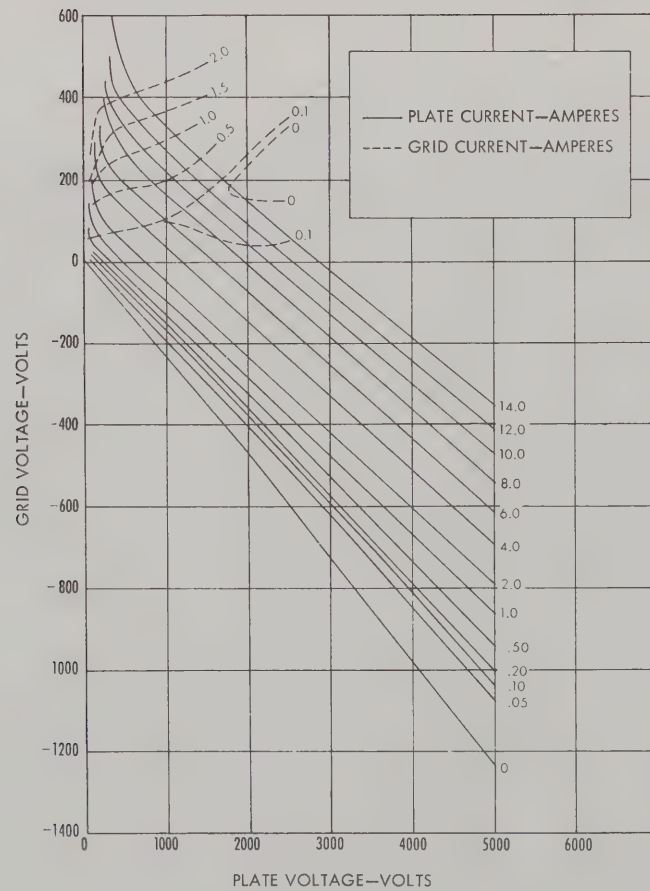
3CW5000F1

CHARACTERISTICS

CAPACITANCE										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE-FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/CHIMNEY
7.5	49.0 to 54.0	29.0	17.0	2.5	8.594	4.156	6.25	Forced-Air	Coaxial	☼☼ —
7.5	49.0 to 54.0	29.0	17.0	2.5	18.0	4.156	7.5	Forced-Air	—	—
7.5	49.0 to 54.0	29.0	17.0	2.5	12.562	3.625	3.5	Water and Forced-Air	Coaxial	☼☼ —
7.5	49.0 to 54.0	29.0	17.0	2.5	22.0	3.625	4.8	Water and Forced-Air	—	—

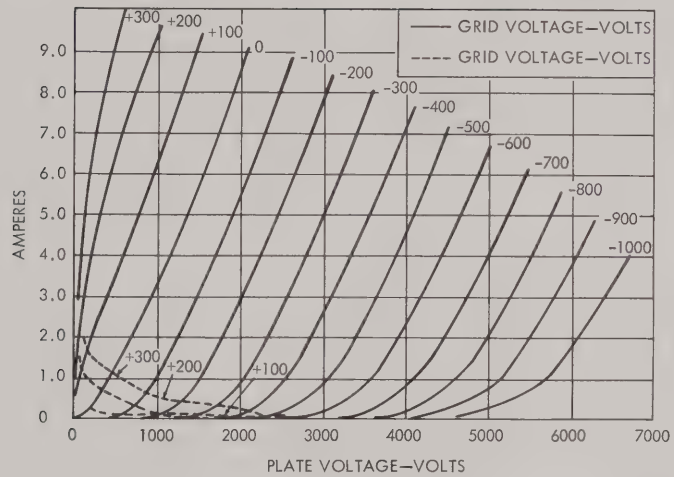
**TYPICAL
CONSTANT GRID VOLTAGE
CHARACTERISTICS**

**3CX3000A1
3CX3000F1
3CW5000A1
3CW5000F1**



**TYPICAL
PLATE
CHARACTERISTICS**

**3CX3000A1
3CX3000F1
3CW5000A1
3CW5000F1**



EXTERNAL ANODE



3CX3000A7

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX3000A7	B	Audio-Frequency Power Amplifier and Modulator		5000	2.5	3000	225		4000	4.0*	120.0*	11,000*
	B	Radio-Frequency Linear Power Amplifier, Grounded-Grid, SSB	75	5000	2.5	3000	225	250	5000	1.56	215.0	5500
	B	Radio-Frequency Linear Power Amplifier Carrier Conditions		5000	2.5	3000	225		4000	0.815	15.0	1100
3CX3000F7	B	Audio-Frequency Power Amplifier and Modulator		5000	2.5	3000	225		4000	4.0*	120.0*	11,000*
	B	Radio-Frequency Linear Power Amplifier, Grounded-Grid, SSB	30	5000	2.5	3000	225	175	5000	1.56	215.0	5500
	B	Radio-Frequency Linear Power Amplifier Carrier Conditions		5000	2.5	3000	225		4000	0.815	15.0	1100

* Two tubes
 ** None, however Collets available from Eimac
 P/N 149575 Inner Filament
 P/N 149576 Outer Filament



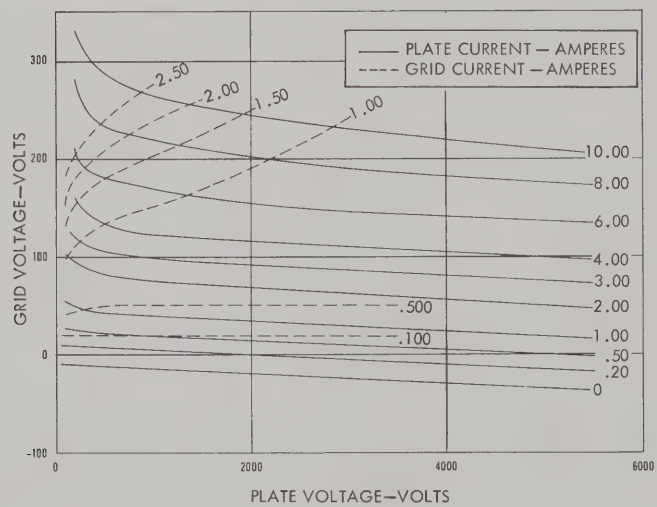
3CX3000F7

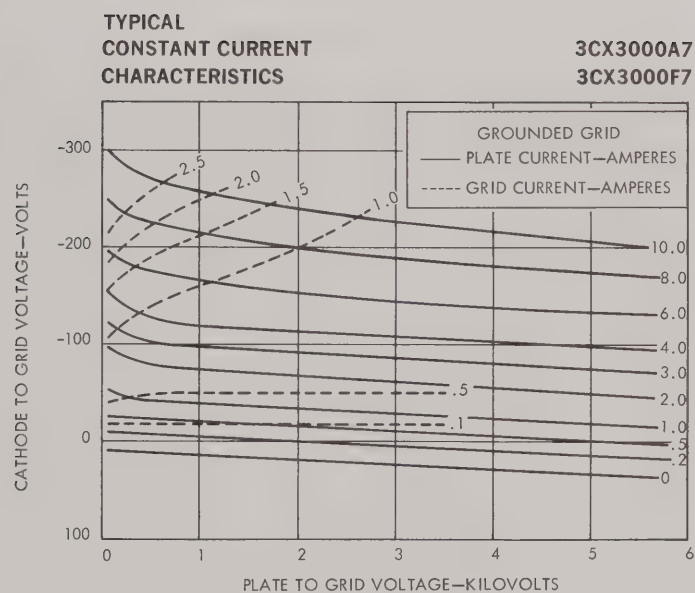
CHARACTERISTICS

CAPACITANCE										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	51.0	38.0	24.0	0.6	8.594	4.156	6.25	Forced-Air	Coaxial	—
7.5	51.0	38.0	24.0	0.6	8.594	4.156	7.5	Forced-Air	—	—

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**3CX3000A7
3CX3000F7**



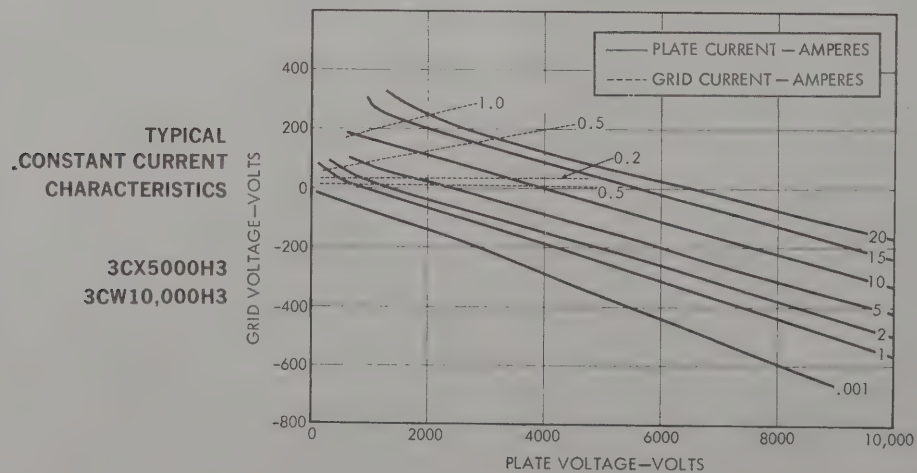


EXTERNAL ANODE



PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX5000H3	C	Radio-Frequency Industrial Oscillator	90	10,000	3.0	5000	150	250	9000	2.52	208.0	18,600
3CW10,000H3	C	Radio-Frequency Industrial Oscillator	90	10,000	3.0	10,000		250	9000	2.9	215.0	20,600





3CW10,000H3

CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	73.0 to 78.0	INPUT 53.0	25.0	OUTPUT 1.5	18.0	6.4	10.0	Forced-Air	—	—
7.5	73.0 to 78.0	INPUT 53.0	25.0	OUTPUT 1.5	18.0	6.05	10.0	Water and Forced-Air	—	—

EXTERNAL ANODE

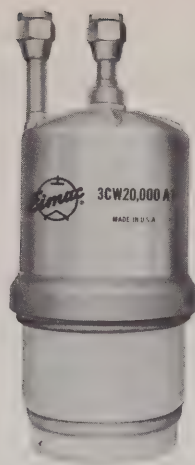


3CX10,000A1/
8158

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX10,000A1/ 8158	AB ₁	Audio-Frequency Power Amplifier and Modulator	140	7000	5.0	12,000	100	250	7000	7.0*	0.0	29,100*
	A	Audio-Frequency Amplifier or Modulator		7000	1.0	12,000	100		2500	4.0	—	1800
3CW20,000A1	AB ₁	Audio-Frequency Power Amplifier and Modulator	140	7000	5.0	20,000	100	250	7000	7.0*	0.0	29,100*
	C	Radio-Frequency Industrial Oscillator		5000	4.0	20,000	100		5000	2.75	385.0	11,000
	A	Voltage Regulator Service		7000	1.0	12,000	100		0-5000	0.5	0.0	—
	A	Voltage Regulator Service		10,000	0.35	12,000	100		0-5000	0.5	0.0	—
	A	Audio-Frequency Power Amplifier and Modulator		7000	1.0	20,000	100		2500	4.0	0.0	1800

* Two tubes



3CW20,000A1

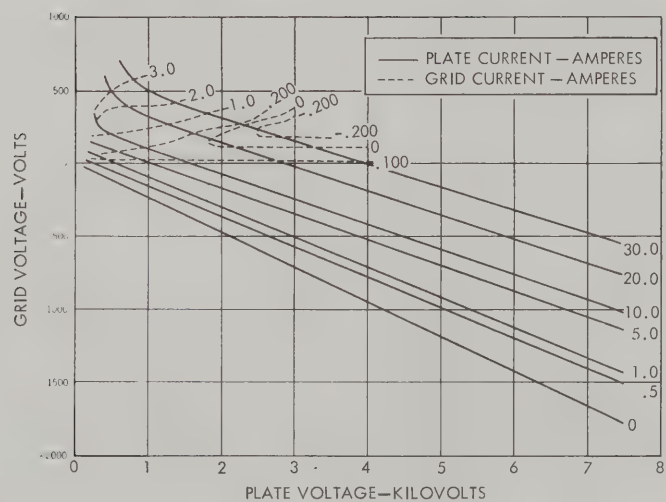
CHARACTERISTICS

CAPACITANCE

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	94.0 to 104.0	45.0 to 57.0	25.0 to 32.0	3.4 to 4.2	8.75	7.0	12.0	Forced-Air	Coaxial	Eimac SK-1300
7.5	94.0 to 104.0	45.0 to 57.0	25.0 to 32.0	3.4 to 4.2	11.4	4.7	12.0	Water and Forced-Air	Coaxial	Eimac SK-1300

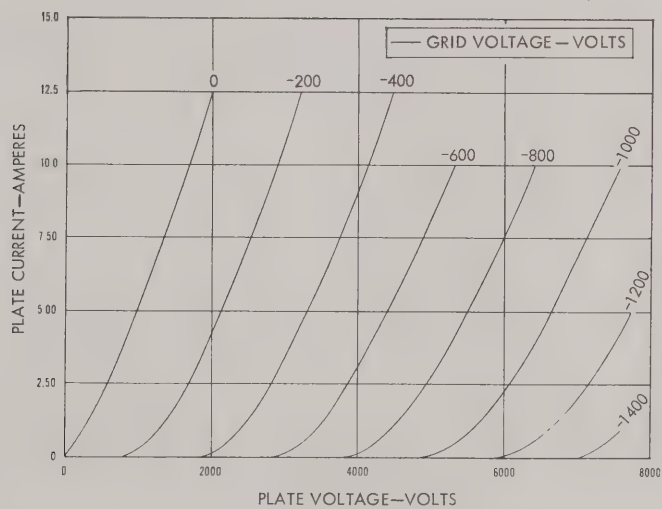
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**3CX10,000A1/8158
3CW20,000A1**



**TYPICAL
PLATE
CHARACTERISTICS**

**3CX10,000A1/8158
3CW20,000A1**



EXTERNAL ANODE



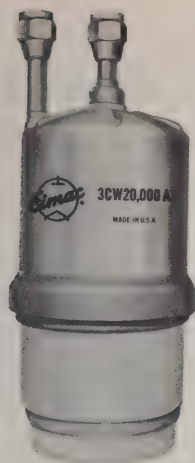
3CX10,000A3/
8159



3CX10,000H3

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS				SEAL TEMP (°C)	TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)		PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX10,000A3/ 8159	C	Radio-Frequency Industrial Oscillator		7000	4.0	10,000	250		7000	4.0	—	22,400
	AB ₂	Radio-Frequency Linear Power Amplifier, Grounded-Grid-SSB	140	7000	5.0	12,000	250	250	7000	4.0	2050.0	20,000
	C	Radio-Frequency Power Amplifier, Grounded-Grid		7000	4.0	10,000	250		7000	4.0	4100.0	24,500
	C	Plate-Modulated Radio-Frequency Power Amplifier		5500	3.0	6500	250		5000	3.0	515.0	12,400
3CX10,000H3	C	Radio-Frequency Industrial Oscillator	90	10,000	4.0	10,000	250	250	9000	4.0	570.0	29,000
3CW20,000A3	C	Radio-Frequency Industrial Oscillator		7000	4.0	20,000	250		7000	4.0	—	22,400
	AB ₂	Radio-Frequency Linear Power Amplifier, Grounded-Grid-SSB		7000	5.0	20,000	250		7000	4.0	2050.0	20,000
	C	Radio-Frequency Power Amplifier, Grounded-Grid	140	7000	4.0	20,000	250	250	7000	4.0	4100.0	24,500
	C	Plate-Modulated Radio-Frequency Power Amplifier		5500	3.0	13,500	250		5000	3.0	515.0	12,400
3CW20,000H3	C	Radio-Frequency Industrial Oscillator	90	12,000	4.0	20,000	0.6 amps	250	10,000	4.0	340.0	28,000



3CW20,000A3



3CW20,000H3

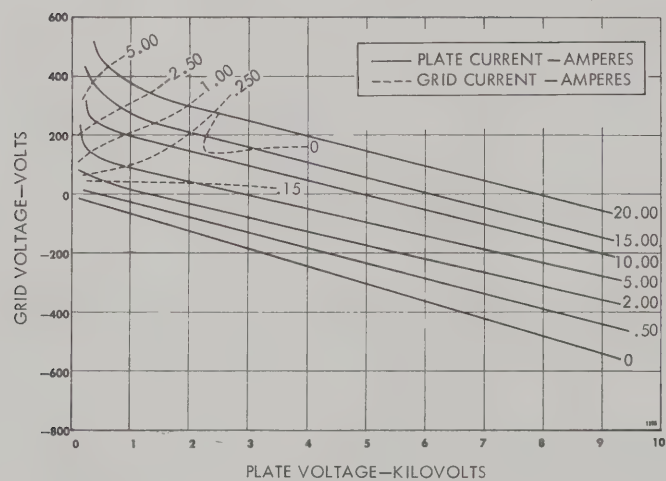
CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE-FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/CHIMNEY
7.5	94.0 to 104.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	8.5	7.0	12	Forced-Air	Coaxial	Eimac SK-1300
7.5	94.0 to 104.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	18.0	7.05	12	Forced-Air	—	—
7.5	94.0 to 104.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	11.4	4.7	12	Water and Forced-Air	Coaxial	Eimac SK-1300
7.5	94.0 to 104.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	18.0	6.75	12	Water and Forced-Air	—	—

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**3CX10,000A3/8159
3CX10,000H3
3CW20,000A3
3CW20,000H3**



NOTES:



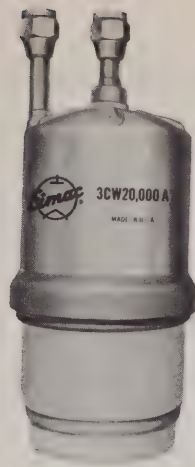
INTERNAL ANODE

3CX10,000A7/
8160

PERFORMANCE DATA

				MAXIMUM RATINGS				TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX10,000A7/ 8160	B	Audio-Frequency Power Amplifier and Modulator		7000	5.0	12,000	500		7000	10.0*	560.0*	47,700*
	B	Radio-Frequency Linear Power Amplifier, Grounded-Grid-SSB	160	7000	5.0	12,000	500	250	7000	5.0	1540.0	24,200
	C	Radio-Frequency Power Amplifier and Oscillator		7000	4.0	10,000	500		7000	4.0	430.0	21,300
	C	Plate-Modulated Radio-Frequency Power Amplifier		5500	3.0	6500	500		5000	3.0	380.0	11,900
3CW20,000A7	B	Audio-Frequency Power Amplifier and Modulator		7000	5.0	20,000	500		7000	10.0*	560.0*	47,700*
	B	Radio-Frequency Linear Power Amplifier, Grounded-Grid-SSB		7000	5.0	20,000	500		7000	5.0	1540.0	24,200
	B	Radio-Frequency Linear Power Amplifier, Carrier Conditions, Grounded-Grid	140	7000	5.0	20,000	500	250	7000	2.4	330.0	5650
	C	Radio-Frequency Power Amplifier and Oscillator		7000	4.0	20,000	500		7000	4.0	530.0	21,300
	C	Plate-Modulated Radio-Frequency Power Amplifier		5500	3.0	13,500	500		5000	3.0	380.0	11,900

* Two tubes



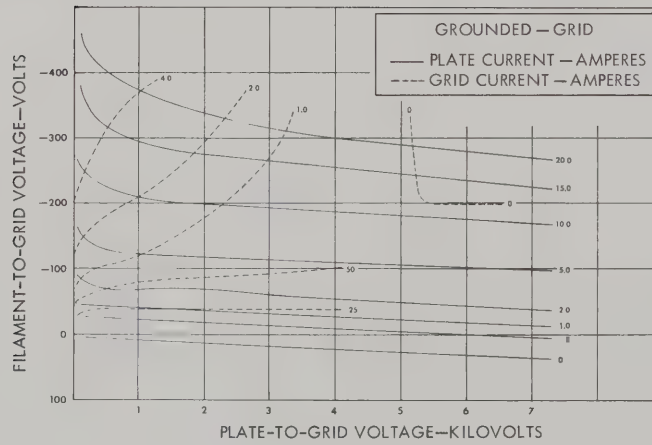
3CW20,000A7

CHARACTERISTICS

CAPACITANCE										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE - FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	94.0 to 104.0	50.0 to 62.0	32.0 to 40.0	0.3	8.75	7.05	12	Forced-Air	Coaxial	Eimac SK-1300
7.5	94.0 to 104.0	50.0 to 62.0	32.0 to 40.0	0.3	11.4	4.7	12	Water and Forced-Air	Coaxial	Eimac SK-1300

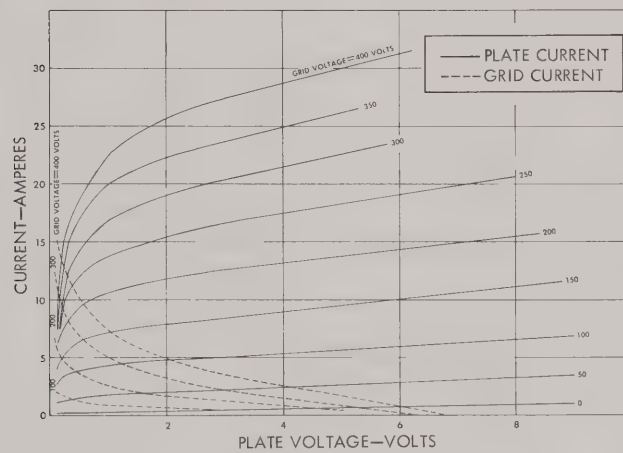
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**3CX10,000A7/8160
3CW20,000A7**



**TYPICAL
PLATE
CHARACTERISTICS**

**3CX10,000A7/8160
3CW20,000A7**



EXTERNAL ANODE



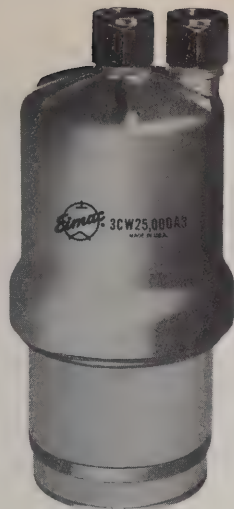
3CX15,000A3

3CX15,000H3

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX. RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX15,000A3	C	Radio-Frequency Power Amplifier and Oscillator		8000	6.0	15,000	500		7000	6.0	660.0	30,000
	AB or B	Radio-Frequency Linear Power Amplifier	100	8000	6.0	15,000	500	250	7000	4.8	215.0	23,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		6500	5.0	10,000	500		6000	3.9	490.0	18,000
3CX15,000H3	C	Radio-Frequency Industrial Oscillator	90	12,000	6.0	15,000	—	250	10,000	5.0	650.0	41,200
3CW25,000A3	C	Radio-Frequency Industrial Oscillator		10,000	6.0	25,000			10,000	6.0	365.0	42,000
	AB ₂	Radio-Frequency Linear Power Amplifier	100	10,000	6.0	25,000	500	250	10,000	6.0	240.0	41,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		7000	5.0	16,500	500		7000	5.0	750.0	27,500
3CW30,000H3	C	Radio-Frequency Industrial Oscillator	90	12,000	6.0	30,000	1.0 amps	250	10,000	6.0	365.0	42,000
3CV30,000A3	C	Radio-Frequency Industrial Oscillator		10,000	6.0	30,000	500		10,000	6.0	365.0	42,000
	C	Radio-Frequency Power Amplifier Plate-Modulated	100	7000	5.0	20,000	500	250	7000	5.0	750.0	27,500
	AB ₂	Radio-Frequency Linear Amplifier		10,000	6.0	30,000	500		10,000	6.0	240.0	41,000

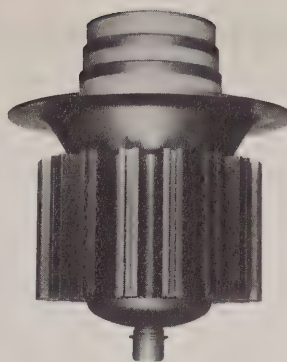
* Two tubes



3CW25,000A3



3CW30,000H3



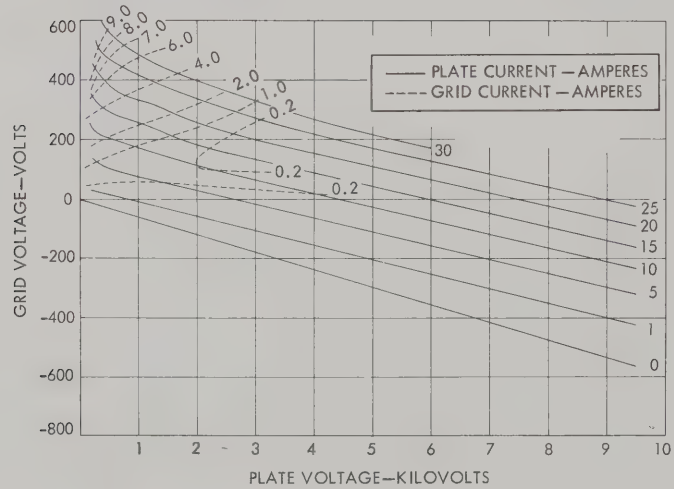
3CV30,000A3

CHARACTERISTICS

CAPACITANCE										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID-FILAMENT (pF)	GRID-PLATE (pF)	PLATE FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/CHIMNEY
6.3	152.0 to 172.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	8.5	7.0	12	Forced-Air	Coaxial	Eimac SK-1300
6.3	152.0 to 172.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	18.0	7.05	13	Forced-Air	—	—
6.3	152.0 to 172.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	9.4	5.0	12	Water and Forced-Air	Coaxial	Eimac SK-1300
6.3	152.0 to 172.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	18.0	6.75	12	Water and Forced-Air	—	—
6.3	152.0 to 172.0	48.0 to 58.0	30.0 to 38.0	1.2 to 1.5	8.75	7.75	18	Vapor and Forced-Air	Coaxial	Eimac SK-1310 and BR-200 Boiler

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**3CX15,000A3
3CX15,000H3
3CW25,000A3
3CW30,000H3
3CV30,000A3**



NOTES:

EXTERNAL ANODE



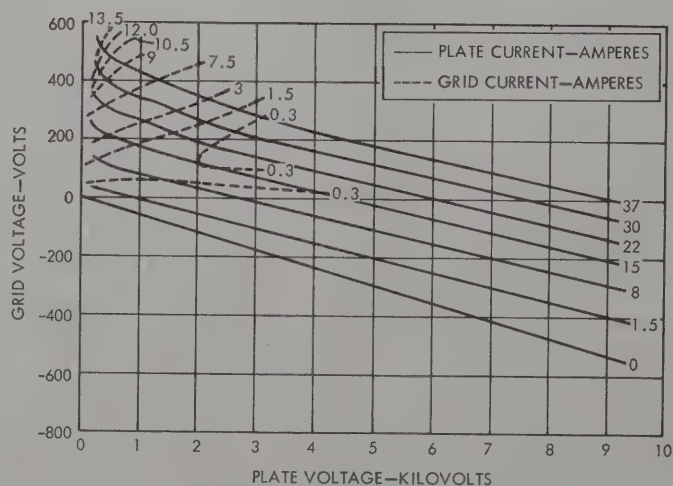
3CX20,000A3

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	MAXIMUM RATINGS						TYPICAL OPERATION			
			FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CX20,000A3	Industrial Oscillator		90	12,000	9.0	20,000	1.5 amps	250	7000	9.0	970.0	40,000
3CX20,000H3	Industrial Oscillator		90	12,000	9.0	20,000	1.5 amps	250	7000	9.0	970.0	45,000
3CW40,000H3	Industrial Oscillator		90	12,000	9.0	40,000	1.5 amps	250	10,000	9.0	360.0	65,000

TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

3CX20,000A3
3CX20,000H3
3CW40,000H3





3CX20,000H3



3CW40,000H3

CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT	COOLING	BASE	SOCKET/ CHIMNEY
10.0	162.0	72.0	44.0	1.9	10.0	8.0	—	Forced-Air	—	SK-1300
10.0	162.0	72.0	44.0	1.9	19.0	8.0	—	Forced-Air	—	—
10.0	162.0	72.0	44.0	1.9	19.5	8.0	—	Water and Forced-Air	—	—

EXTERNAL ANODE

6696A

PERFORMANCE DATA

MAXIMUM RATINGS									TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
6696A	AB	Audio-Frequency Power Amplifier and Modulator		16,000	11.0	60,000	1000		12,000	20.0 *	600.0 *	150,000 *
	C	Radio-Frequency Power Amplifier and Oscillator	40	16,000	11.0	60,000	1000	200	15,000	7.0	600.0	80,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		10,000	8.5	40,000	1000		9500	8.4	2000.0	60,000
6697A	C	Radio-Frequency Power Amplifier and Oscillator		16,000	11.0	60,000	1000		15,000	7.0	600.0	80,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		10,000	8.5	23,000	1000		9500	8.4	2000.0	60,000
	AB	Audio-Frequency Power Amplifier and Modulator	40	16,000	11.0	35,000	—	200	10,000	17.4	550.0	110,000
	AB	Radio-Frequency AM Linear Amplifier Carrier Conditions		16,000	9.0	35,000	—		12,000	4.3	450.0	18,000
	AB	Radio-Frequency Linear Amplifier SSB		16,000	11.0	35,000	—		12,000	5.2	3500.0	43,000
7480	AB	Audio-Frequency Amplifier and Modulator		16,000	11.0	80,000	1000		12,000	20.0 *	600.0 *	150,000 *
	C	Radio-Frequency Power Amplifier and Oscillator	40	16,000	11.0	80,000	1000	250	15,000	7.0	600.0	80,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		10,000	8.5	53,000	1000		9500	8.4	2000.0	60,000

* Two tubes



6697A



7480

CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE - FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
13.0	190.0 to 220.0	65.0 to 85.0	47.0 to 57.0	2.0 to 3.2	19.4	4.72	17	Water and Forced-Air	Coaxial	SK-1600 Accessories
13.0	190.0 to 220.0	65.0 to 85.0	47.0 to 57.0	2.0 to 3.2	19.9	5.28	43	Forced-Air	Coaxial	SK-1600 Accessories
13.0	190.0 to 220.0	65.0 to 85.0	47.0 to 57.0	2.0 to 3.2	20.1	7.12	50	Vapor and Forced-Air	Coaxial	SK-1600 Acces- sories and BR-400 Boiler

6696A
6697A
7480



NOTES:

EXTERNAL ANODE

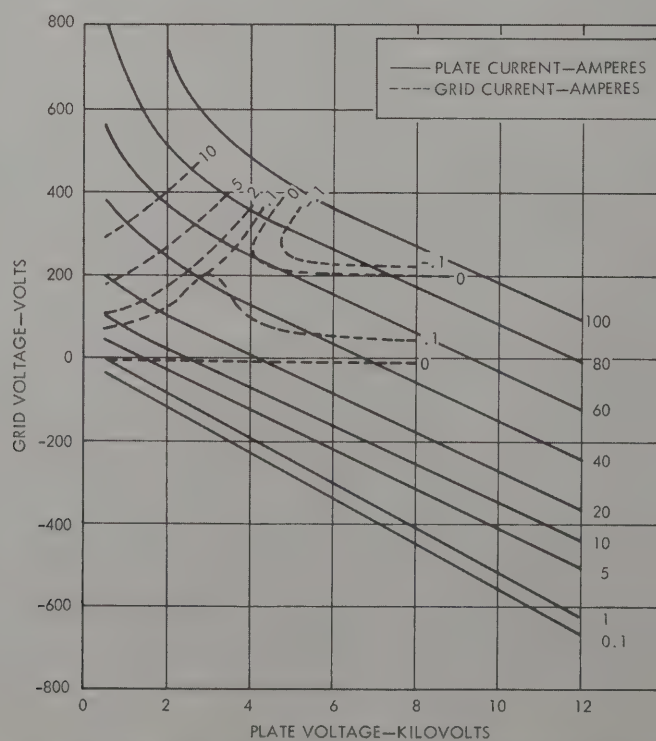


PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	MAXIMUM RATINGS					TYPICAL OPERATION			
				PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	GRID DISS (watts)	PLATE SEAL TEMP (°C)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
3CW100,000H3	Industrial Oscillator		30	20,000	15.0	100,000	3.0 amps	250	14,000	14.0	250.0	220

TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

3CW100,000H3



CHARACTERISTICS

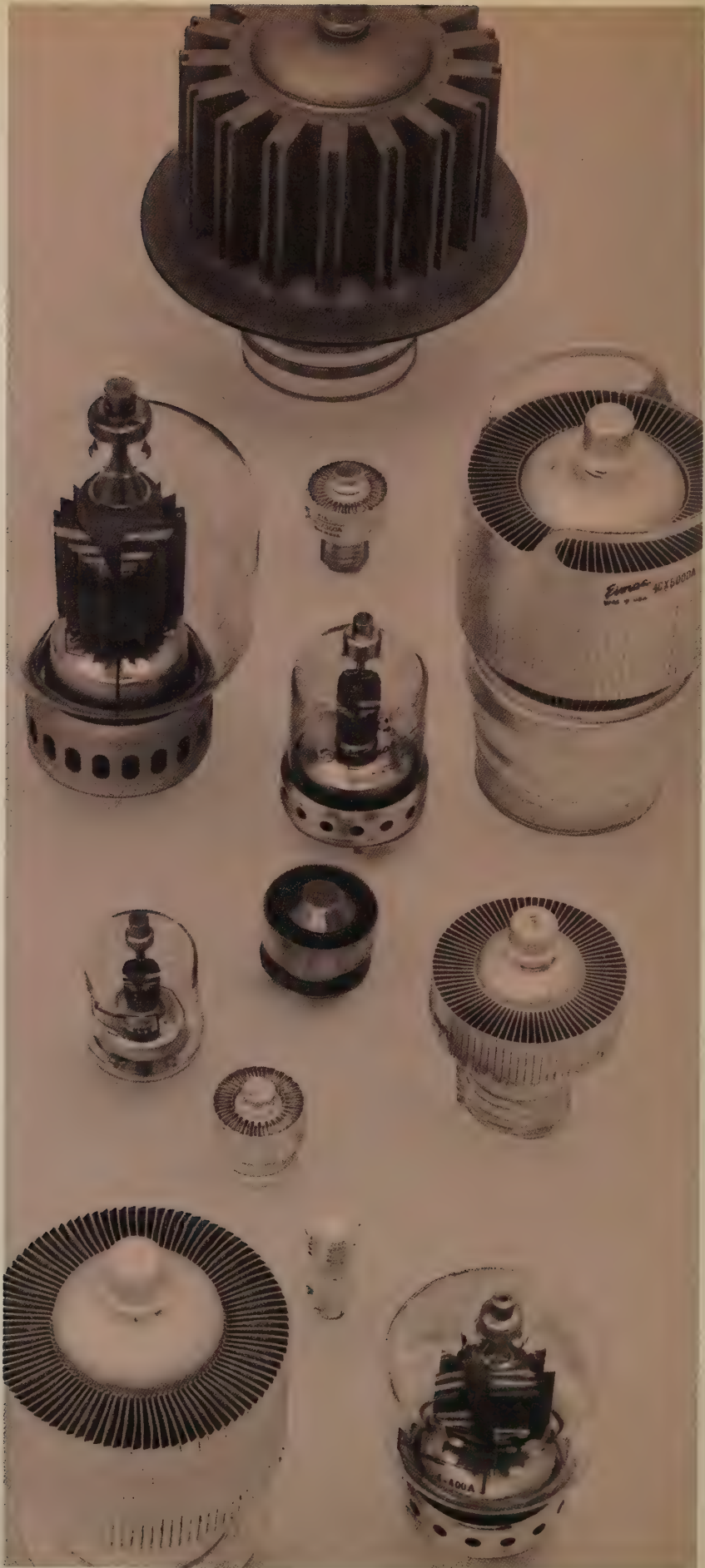
		CAPACITANCE								
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE - FILAMENT (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
10.0	300.0	163.0	87.0	3.3	20.5	9.5	35	Water and Forced-Air		SK-1700 Series Accessories

NOTES:

TETRODES

TETRODES

TETRODES



TETRODES

The following brief descriptions cover unique characteristics of Tetrodes designed for specific applications.

These data should be used as aids in systems design where tube requirements are generally firm.

4-400A/8438

A compact power tetrode having a maximum plate dissipation rating of 400 watts, for use as an amplifier, oscillator, or modulator. The low grid-plate capacitance coupled with its low driving-power requirement allows considerable simplification of the associated circuit and driver stage.

4X150R/8296

A ruggedized version of the 4X150A.

4CX250B/7203

A general-purpose external-anode tetrode featuring ceramic-metal construction. This compact power tetrode may be used at maximum ratings at frequencies up to 500 MHz.

4W300B/8249

A general-purpose radial-beam tetrode with electrical characteristics similar to those of the 4CX250B. This water-cooled version is intended for use where reserve anode dissipation is desired or where the use of water is a convenience.

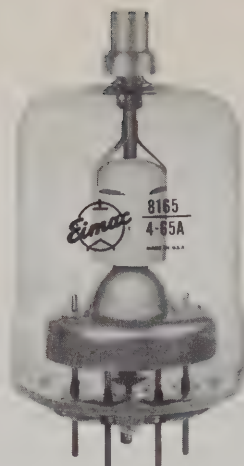
4CX250R/7580W

A ruggedized high plate current version of the 4CX250B.

4CX250K/8245	A coaxial-based tetrode useful as a cw RF amplifier at UHF.
4CPX250K/8590	A pulse-rated version of the coaxial 4CX250K. New cathode techniques permit pulse currents of over three amperes at pulse length up to 250 microseconds.
4CN15A	A special version of the 4CX300A for use in pulse applications or where size, ruggedness and weight are critical. Maximum plate supply voltage as a pulse modulator is 4 KV.
4CX300A/8167	A rugged ceramic-metal tetrode with unique breechblock basing. It has electrical characteristics similar to other tubes in the 4CX250 family but is especially suited for service in severe environments. Its unusual internal construction assures reliable operation at vibration acceleration levels up to 20 g's, and 750 Hz, and shock of 11 MS, 90 g's.
4CX300Y/8561	A special version of the 4CX300A but has a higher plate current rating which allows 60 percent more input power. Externally identical to the 4CX300A, the EIMAC 4CX300Y is attractive for general use whenever a compact high-power tetrode is indicated.
4CX350A/8321	A high Gm, compact radial beam tetrode for Class AB ₁ audio or RF amplifier service. This tube is externally identical to the 4CX250B but contains rugged internal construction features.
4CS250H	A conduction-cooled high-gain tetrode used as a Class AB ₁ linear amplifier, video amplifier or regulator.
4CX600A	A ceramic-metal tetrode with low lead inductances and low interelectrode capacities for distributed amplifier and UHF service. It features four separate grid terminals for maximizing gain and bandwidth.
4CW800A	A liquid-cooled VHF - UHF tetrode for distributed amplifier service. It has a DC plate current rating of 600 Ma, and four separate terminals leading to the active grid structure.
4CX1000K/8352	This high-power ceramic-metal tetrode is electrically identical to the 4CX1000A, but gives improved performance at VHF due to its solid-ring screen terminal. This terminal surface improves isolation between input and output circuits to a marked degree and insures stable VHF operation as a Class AB amplifier.

4CX1500B/8660	A ceramic-metal, radial-beam tetrode. It is a low-voltage, high-current tube specifically designed for exceptionally low intermodulation distortion and low grid interception. The low distortion characteristics make this tube especially suitable for radio-frequency and audio-frequency linear amplifier service.
4CX3000A/8169	A ceramic-metal tetrode for Class Ab ₁ linear amplifier service. In such service, the intermodulation distortion products produced by the 4CX3000A are of very low level, typically 32 to 44 db below PEP level, depending on operating conditions.
4CX5000R/8170W	A ruggedized version of the 4CX5000A power tetrode, the 4CX5000R incorporates a sturdy mesh cathode construction. Electrically identical to the "A" version, it is an excellent choice for applications in severe environments.
4CX5000A/8170	This high-power ceramic-metal tetrode features high class AB ₁ output power at audio and radio frequencies. It is also an excellent choice for AM, FM or TV commercial service as a linear or class C amplifier.
4CX10,000D/8171	Electrically identical to the 4CX5000A except for its plate dissipation rating, for use where the extra plate dissipation is a necessity. It may be used at maximum ratings through 30 MHz and at slightly reduced ratings through the FM broadcast band.
4CX15,000A/8281	A versatile ceramic-metal power tetrode, the 4CX15,000A is similar to the 4CX10,000D but features higher plate voltage and current and greater plate dissipation. These increased capabilities allow it to operate at full ratings through the FM broadcast band, and at some reduction of plate voltage up to and including channel 13 TV.
4CX35,000C/8349	An air-cooled power tetrode with a plate dissipation rating of 35 kilowatts. Recommended for broadcast and HF service.
4CV100,000C/8351	A ceramic-metal, vapor-cooled power tetrode intended for use at the 100 to 200 kilowatt output power level, in broadcast, HF, and pulse service.
4CW100,000D	A water-cooled version of the 4CV100,000C.
4CV250,000A	A ceramic-metal vapor-cooled tetrode combining high power gain with long life. This high-power tetrode is designed for use as an audio modulator, pulse modulator, or a regulator, and as an RF amplifier in communication service and linear accelerators.

INTERNAL ANODE



4-65A/
8165

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4-65A/ 8165	AB ₁	Audio-Frequency Power Amplifier and Modulator	150	3000	0.15	65	10	—		2000	500	0.15	0.0	170
	AB ₁	Radio Frequency Linear Power Amplifier-SSB		3000	0.15	65	10	—		3000	400	0.06	0.0	120
	C	Radio-Frequency Power Amplifier and Oscillator		3000	0.15	65	10	5		3000	250	0.112	1.6	270
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.12	45	10	5		2500	250	0.102	3.0	210

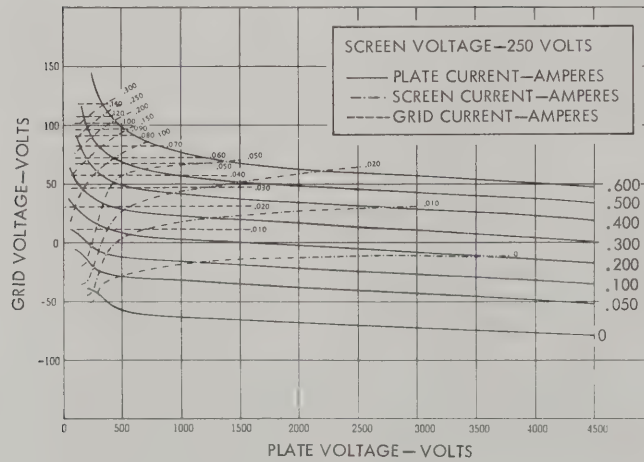
* Two tubes

CHARACTERISTICS

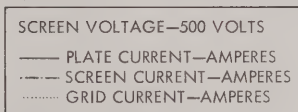
CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	3.2 to 3.8	6.0 to 8.3	1.9 to 2.6	0.12	4.19	2.38	3	Convection	5-Pin	National HX29 or Johnson 122-101 —*— Plus Eimac HR-6

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

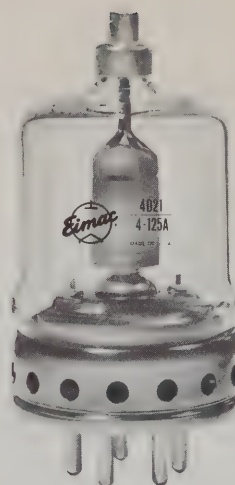
4-65A/8165



4-65A/8165



INTERNAL ANODE



4-125A/
4D21

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4-125A/ 4D21	AB ₁	Audio-Frequency Power Amplifier and Modulator		3000	0.225	125	20	—		2500	600	0.232*	0.0	330*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		3000	0.225	125	20	—		2500	600	0.116	0.0	165
	AB ₂	Audio-Frequency Power Amplifier and Modulator	120	3000	0.225	125	20	5	170	2500	350	0.26*	1.0*	400
	C	Radio-Frequency Power Amplifier and Oscillator		3000	0.225	125	20	5		3000	350	0.167	2.5	375
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.2	85	20	5		2500	350	0.152	3.3	300
6155	AB ₁	Audio-Frequency Power Amplifier and Modulator		3000	0.225	125	20	—		2500	600	0.232*	0.0	330*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		3000	0.225	125	20	—		3000	510	0.105	0.0	200
	AB ₂	Audio-Frequency Power Amplifier and Modulator	120	3000	0.225	125	20	5	170	2500	350	0.26*	1.0*	400
	C	Radio-Frequency Power Amplifier and Oscillator		3000	0.225	125	20	5		3000	350	0.167	2.5	375
	C	Plate-Modulated Radio-Frequency Power Amplifier		2500	0.2	85	20	5		2500	350	0.152	3.3	300

* Two tubes



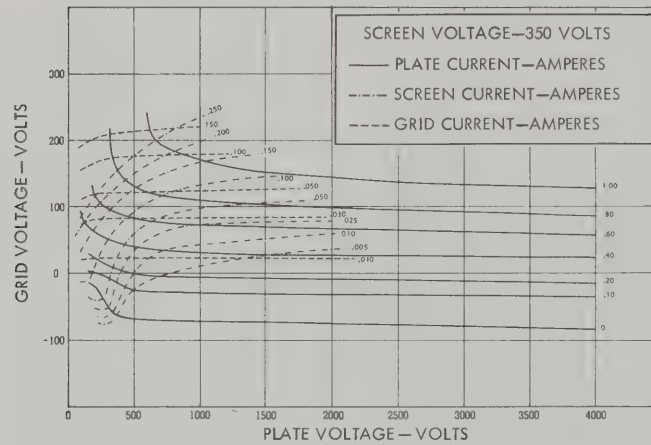
6155

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0	6.0 to 7.0	9.2 to 12.4	2.5 to 3.5	0.07	5.69	2.81	6.5	Forced-Air	5-Pin Metal Shell	National HX100 or Johnson 122-275 —*— Plus Eimac HR-6
5.0	6.0 to 7.0	9.2 to 12.4	2.5 to 3.5	0.07	5.69	2.81	6.5	Forced-Air	5-Pin	National HX100 or Johnson 122-275 —*— Plus Eimac HR-6

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4-125A/4D21
6155**



NOTES:

INTERNAL ANODE



4-250A/
5D22

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4-250A/ 5D22	AB ₁	Audio-Frequency Power Amplifier and Modulator		4000	0.35	250	35	—		3000	600	0.417*	0.0	750*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	110	4000	0.35	250	35	—		3000	300	0.21	0.0	375
	AB ₂	Audio-Frequency Power Amplifier and Modulator		4000	0.35	250	35	10	200	3000	300	0.473*	1.9	1040*
	C	Radio-Frequency Power Amplifier and Oscillator	110	4000	0.35	250	35	10		4000	500	0.312	2.46	1000
	C	Plate-Modulated Radio-Frequency Power Amplifier	110	3200	0.275	165	35	10		3000	400	0.225	3.2	510
6156	AB ₁	Audio-Frequency Power Amplifier and Modulator		4000	0.35	250	35	—		3000	600	0.417*	0.0	750*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	110	4000	0.35	250	35	—		3000	300	0.210	0.0	375
	AB ₂	Audio-Frequency Power Amplifier and Modulator		4000	0.35	250	35	10	200	3000	300	0.473*	1.9	1040*
	C	Radio-Frequency Power Amplifier and Oscillator	110	4000	0.35	250	35	10		4000	500	0.312	2.46	1000
	C	Plate-Modulated Radio-Frequency Power Amplifier	110	3200	0.275	165	35	10		3000	400	0.225	3.2	510

* Two tubes



6156

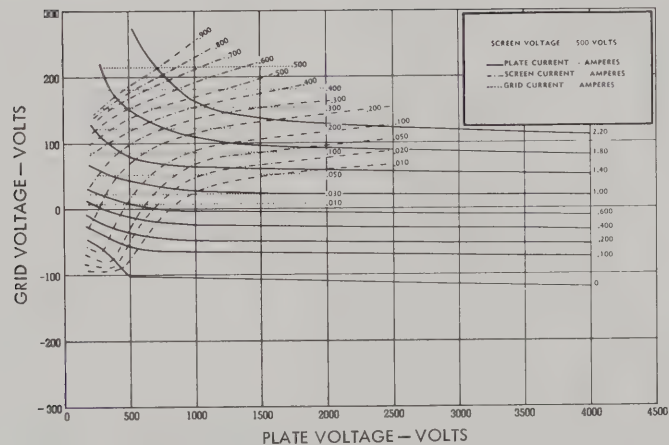
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0	13.5 to 14.7	10.7 to 14.5	3.7 to 5.1	0.14	6.38	3.56	8	Forced-Air	5-Pin Metal Shell	Eimac SK-400 Eimac SK-410 —*— Plus Eimac HR-6
5.0	13.5 to 14.7	10.7 to 14.5	3.7 to 5.1	0.14	6.38	3.56	8	Forced-Air	5-Pin	Eimac SK-410 —*— Plus Eimac HR-6

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4-250A/5D22
6156**



NOTES:

INTERNAL ANODE



4-400A/
8438

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4-400A/ 8438	AB ₁	Audio-Frequency Power Amplifier and Modulator		4000	0.35	400	35	—		4000	750	0.585*	0.0	1540*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	110	4000	0.35	400	35	—		4000	750	0.29	0.0	770
	AB ₂	Audio-Frequency Power Amplifier and Modulator		4000	0.35	400	35	10	200	4000	500	0.638	3.5*	1750*
	C	Radio-Frequency Power Amplifier and Oscillator	110	4000	0.35	400	35	10		4000	500	0.35	5.8	1100
	C	Plate-Modulated Radio-Frequency Power Amplifier	110	3200	0.275	270	35	10		3000	500	0.275	3.5	630
7257	AB ₁	Audio-Frequency Power Amplifier and Modulator		4000	0.35	400	35	—		4000	750	0.585*	0.0	1540*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	110	4000	0.35	400	35	—		4000	705	0.25	0.0	650
	AB ₂	Audio-Frequency Power Amplifier and Modulator		4000	0.35	400	35	10	200	4000	500	0.683*	3.5*	1750*
	C	Radio-Frequency Power Amplifier and Oscillator	110	4000	0.35	400	35	10		4000	500	0.35	5.8	1100
	C	Plate-Modulated Radio-Frequency Power Amplifier	110	3200	0.275	270	35	10		3000	500	0.275	3.5	630

* Two tubes



7257

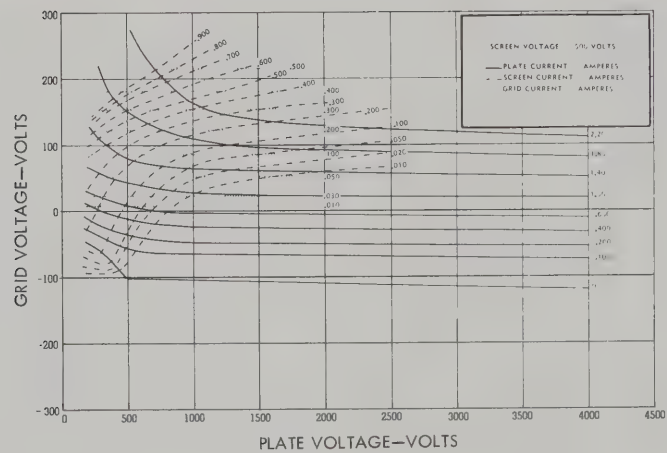
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
5.0	13.5 to 14.7	10.7 to 14.5	4.2 to 5.6	0.17	6.38	3.56	9	Forced-Air	5-Pin Metal Shell	Eimac SK-400 Eimac SK-410 — • — Plus Eimac HR-6
5.0	13.5 to 14.7	10.7 to 14.5	4.2 to 6.6	0.17	6.38	3.56	9	Forced-Air	5-Pin	Eimac SK-400 Eimac SK-410 — • — Plus Eimac HR-6

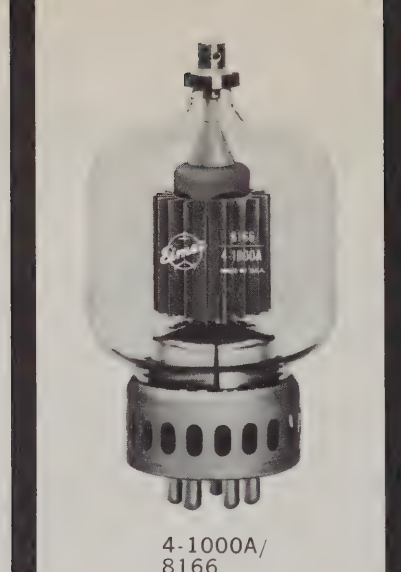
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4-400A/8348
7257**



NOTES:

INTERNAL ANODE



PERFORMANCE DATA

MAXIMUM RATINGS															TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)					
4-1000A/ 8166	AB ₁	Audio-Frequency Power Amplifier and Modulator		6000	0.7	1000	75	—		6000	1000	0.95*	0.0	3840*					
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	110	6000	0.7	1000	75	—		6000	1000	0.475	0.0	1920					
	AB ₂	Audio-Frequency Power Amplifier and Modulator		6000	0.7	1000	75	25	150	6000	500	0.95*	4.7*	3900*					
	C	Radio-Frequency Power Amplifier and Oscillator	110	6000	0.7	1000	75	25		6000	500	0.7	15.0	3400					
	C	Plate-Modulated Radio-Frequency Power Amplifier	110	5000	0.6	670	75	25		5500**	500	0.6	9.0	2630					

* Two tubes

** Below 30 MHz

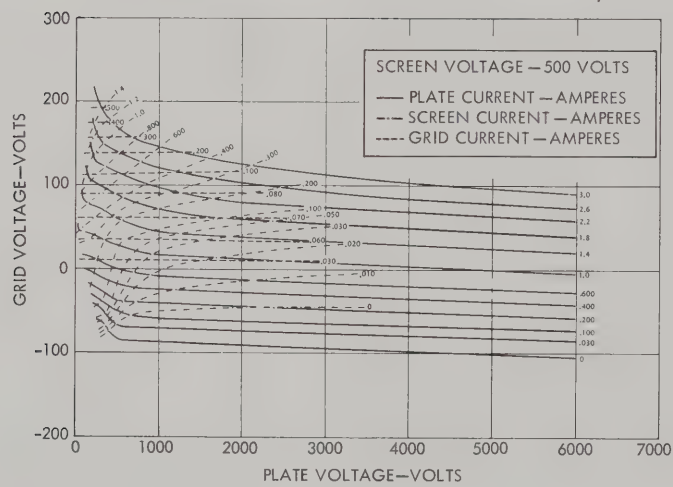
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	20.0 to 22.7	23.8 to 32.4	6.8 to 9.4	0.35	9.63	5.25	1.5	Forced-Air	5-Pin Metal Shell	Eimac SK-500 Eimac SK-510 —•— Plus Eimac HR-8

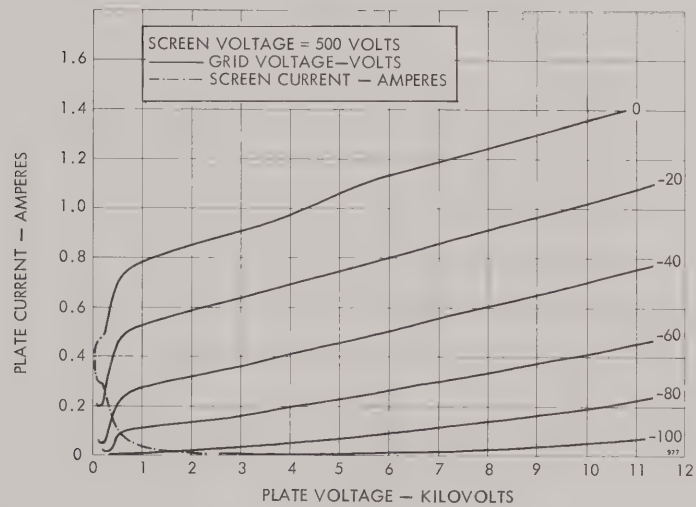
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4-1000A/8166



**TYPICAL
PLATE
CHARACTERISTICS**

4-1000A/8166



EXTERNAL ANODE



7843

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	MAXIMUM RATINGS							TYPICAL OPERATION				
			FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
7843		Audio-Frequency Power Amplifier and Modulator		1000	0.18	115	7.0	1.0		850	300	200.0*	—	80*
		Radio-Frequency Linear Power Amplifier-SSB	1215	1000	0.18	115	7.0	1.0	250	850	300	100.0	—	40
		Radio-Frequency Power Amplifier and Oscillator		1000	0.18	115	7.0	1.0		900	300	170.0	5.0	40
		Plate-Modulated Radio-Frequency Power Amplifier		800	0.15	76	4.6	1.0		700	250	130.0	3.0	45

* Two tubes

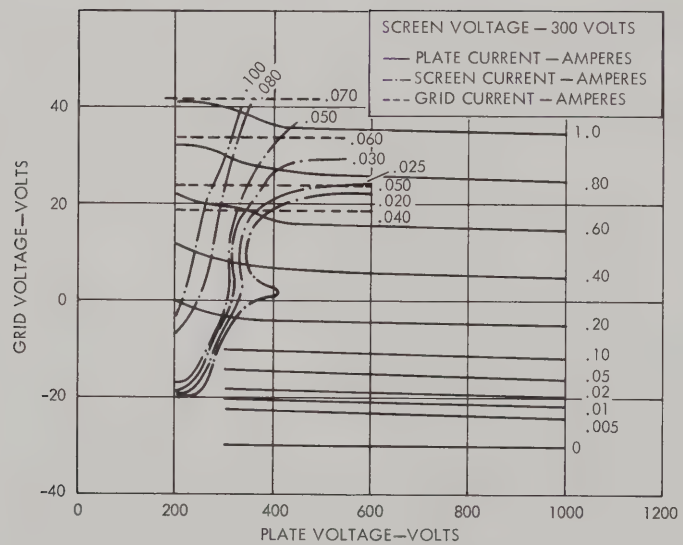
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
26.5	0.48 to 0.60	27.8 to 34.6	4.2 to 5.2	0.065	1.85	1.10	2	Conduction	Special Concentric	Johnson 124-152 (Screen bypass capacitor and terminal Erie 2929001)

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

7843



NOTES:

EXTERNAL ANODE



4X150A/
7034

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4X150A/ 7034	AB ₁	Audio-Frequency Power Amplifier and Modulator	150	2000	0.25	250	12	—	175	2000	350	0.5*	0.0	600*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1600	0.2	165	12	2		1600	250	0.2	3.6	250
4X150D/ 7035	AB ₁	Audio-Frequency Power Amplifier and Modulator	150	2000	0.25	250	12	—	175	2000	350	0.5*	0.0	600*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1600	0.2	165	12	2		1600	250	0.2	3.6	250

* Two tubes



4X150D/
7035

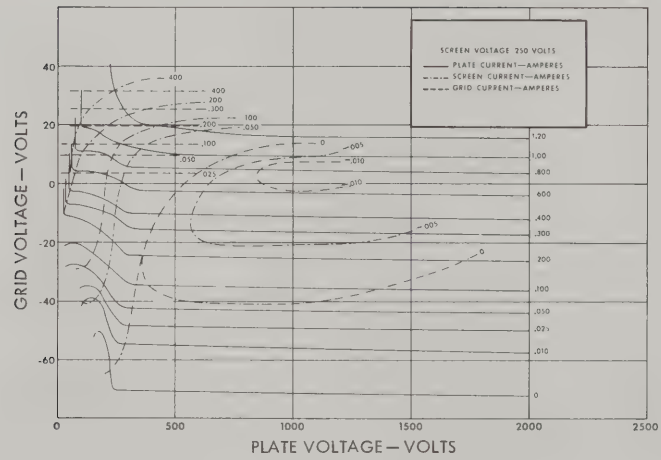
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.3 to 2.9	14.5 to 17.0	4.0 to 4.8	0.05	2.404	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series
26.5	0.5 to 0.62	14.5 to 17.0	4.0 to 4.8	0.05	2.404	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series

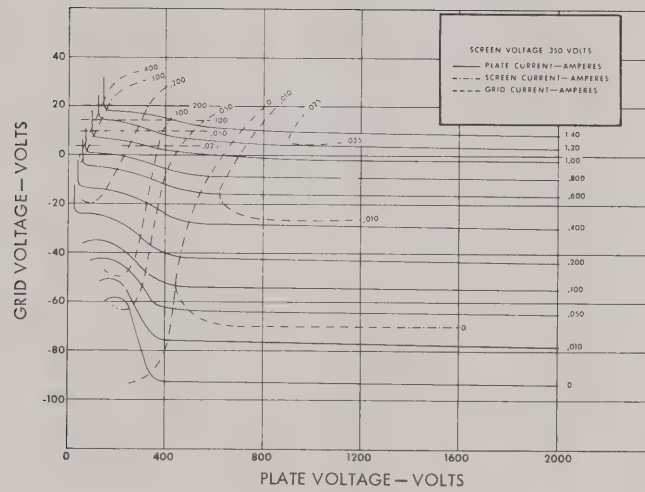
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4X150A/7034
4X150D/7035**



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4X150A/7034
4X150D/7035**



EXTERNAL ANODE



4X150R/
8296

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	MAXIMUM RATINGS							TYPICAL OPERATION				
			FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4X150R/ 8296	AB ₁	Audio-Frequency Power Amplifier and Modulator	150	2000	0.25	250	12	—	250	2000	350	0.5*	0.0	600*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1600	0.2	165	12	2		1600	250	0.2	3.6	250
4X150S/ 8297	AB ₁	Audio-Frequency Power Amplifier and Modulator	150	2000	0.25	250	12	—	250	2000	350	0.5*	0.0	600*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1600	0.2	165	12	2		1600	250	0.2	3.6	250

* Two tubes



4X150S/
8297

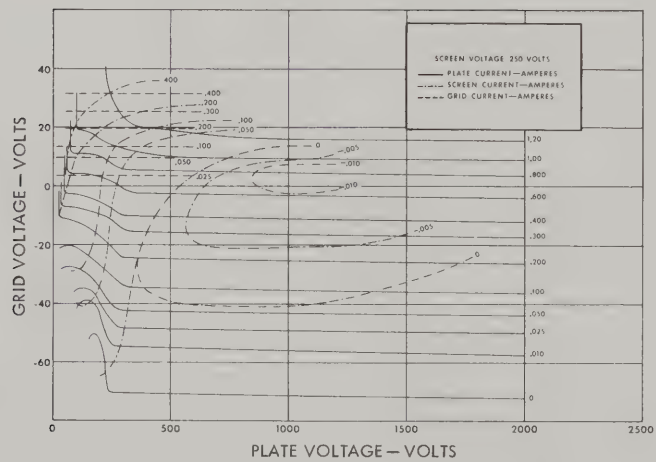
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.4 to 3.0	16.0 to 18.5	4.2 to 5.2	0.06	2.404	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series
26.5	0.56 to 0.68	16.0 to 18.5	4.2 to 5.2	0.06	2.404	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series

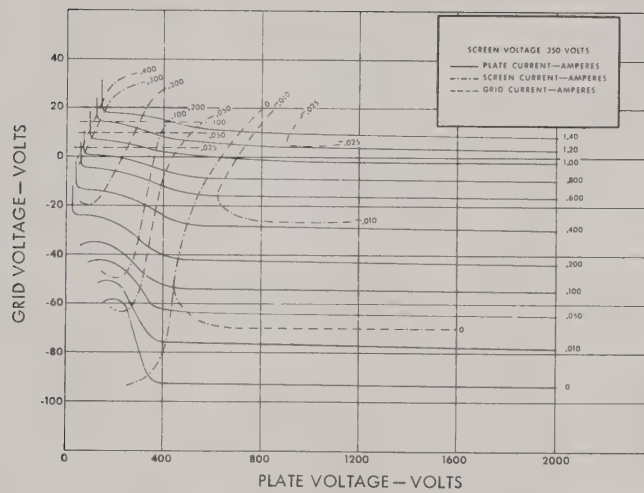
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4X150R/8296
4X150S/8297**



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4X150R/8296
4X150S/8297**





4X150G/
8172

EXTERNAL ANODE

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4X150G/ 8172	B _v	Radio-Frequency Visual Amplifier TV-Visual Service	500 Mc-cw	1250	0.25	250	12	2		1250	300	0.305*	9.0	250*
	C	Plate-Pulsed Radio Frequency Power Amplifier and Oscillator	1500 Mc Pulsed	7000 Pulsed	1k 7a	250	12	2	175	7000 Pulsed**	1200**	6.0**		17.0**
	C	Radio-Frequency Power Amplifier and Oscillator		1250	0.25	250	12	2		1250	250	0.2	10.0	140
	C	Plate-Modulated Radio-Frequency Power Amplifier		1000	0.2	165	12	2		1000	250	0.2	2.0	200

* Peak synchronizing level

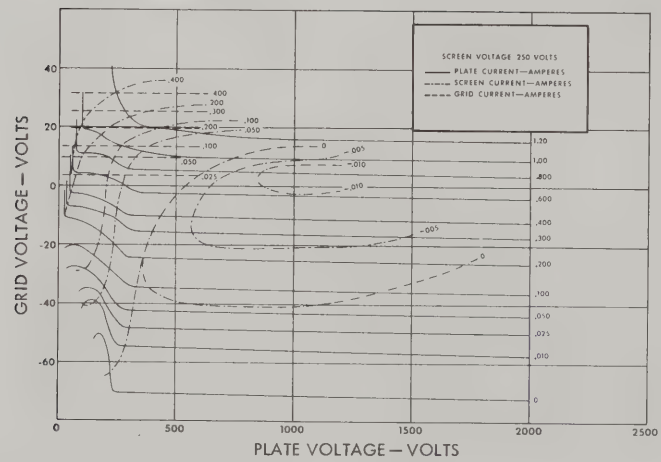
** Plate and screen pulsed. 5 μ sec pulse, 1000 pps.

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
2.5	6.2 to 7.3	25.0 to 29.0	4.0 to 4.9	0.05	2.75	1.635	6	Forced-Air	Coaxial	—

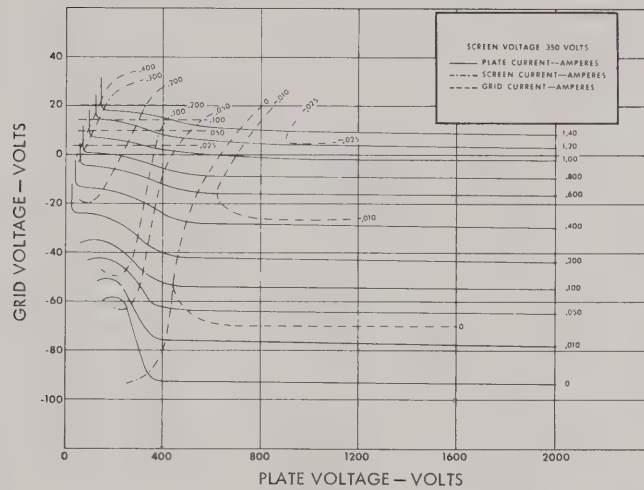
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4X150G/8172



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4X150G/8172



EXTERNAL ANODE



4CX250B/
7203

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION					
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)	
4CX250B/ 7203	AB ₁	Audio-Frequency Power Amplifier and Modulator		2000	0.25	250	12	2		2000	350	0.5*	0.0	600*	
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	2		2000	350	0.25	0.0	300	
	AB ₁	Radio-Frequency Linear Amplifier	500	2000	0.25	250	12	2	250	2000	350	0.15	0.0	65	
	Carrier conditions for 100% modulation														
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390	
4CX250F/ 7204	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	165	12	2		1500	250	0.2	3.6	250	
	Carrier conditions for 100% modulation														
	AB ₁	Audio-Frequency Power Amplifier and Modulator		2000	0.25	250	12	2		2000	350	0.5*	0.0	600*	
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	2		2000	350	0.25	0.0	300	
	AB ₁	Radio-Frequency Linear Amplifier	500	2000	0.25	250	12	2	250	2000	350	0.15	0.0	65	
	Carrier conditions for 100% modulation														
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390	
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	165	12	2		1500	250	0.2	3.6	250	
Carrier conditions for 100% modulation															

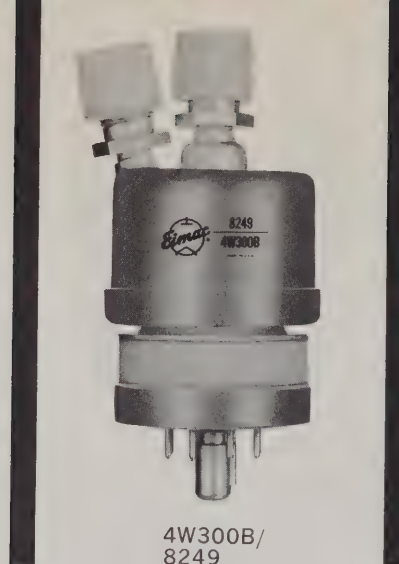
* Two tubes



4CX250F/
7204

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.3 to 2.9	14.2 to 17.2	4.0 to 5.0	0.06	2.464	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series
26.5	0.5 to 0.62	14.2 to 17.2	4.0 to 5.0	0.06	2.464	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series



EXTERNAL ANODE

4W300B/
8249

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4W300B/ 8249	AB ₁	Audio-Frequency Power Amplifier and Modulator	500	2000	0.25	300	12	—	250	2000	350	0.5*	0.0	600*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	300	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	300	12	2		2000	250	0.25	3.0	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	200	12	2		1500	250	0.2	3.6	250

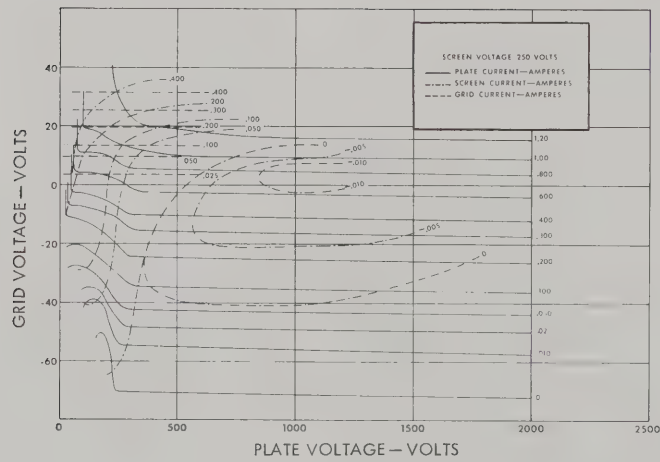
* Two tubes

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.3 to 2.9	14.2 to 17.2	4.0 to 5.0	0.06	3.407	1.562	6	Water and Forced-Air	9-Pin Special	Eimac SK-600 Series

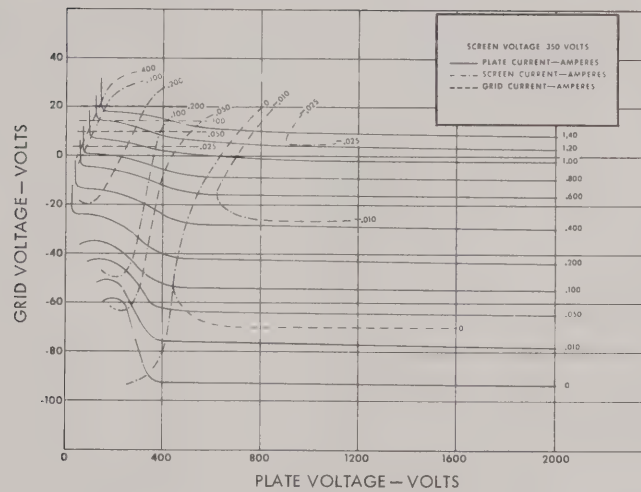
TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX250B/7203
4CX250F/7204
4W300B/8249



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX250B/7203
4CX250F/7204
4W300B/8249**





4CX250R/
7580W

EXTERNAL ANODE

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX250R/ 7580W	AB ₁	Audio-Frequency Power Amplifier and Modulator		2000	0.25	250	12	—		2000	350	0.5*	—	625*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	400	0.245**	—	495***
	AB ₁	Radio-Frequency Linear Amplifier DSB AM	500	2000	0.25	250	12	2	250	2000	400	0.172	—	105
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	250	12	2		2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	165	12	2		1500	250	0.2	1.7	235

* Two tubes

** Two tone average

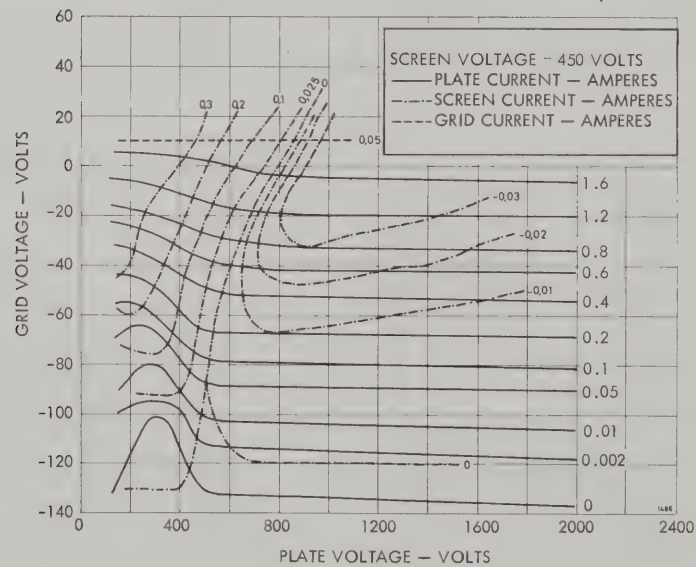
*** PEP useful, output circuit efficiency 95%

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.3 to 2.9	16.0 to 18.5	4.2 to 5.2	0.06	2.464	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series

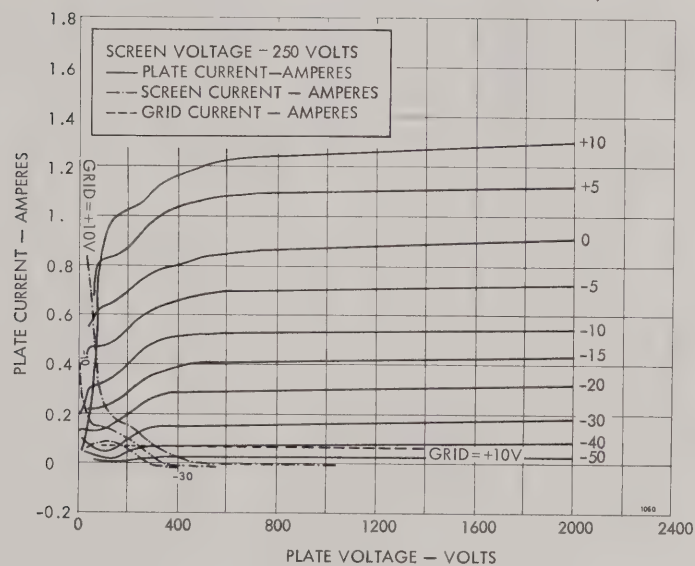
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CX250R/7580W



**TYPICAL
PLATE
CHARACTERISTICS**

4CX250R/7580W





EXTERNAL ANODE

4CX250K/
8245

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX250K/ 8245	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator	500	2000	0.25	250	12	2	250	2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	165	12	2		1500	250	0.2	3.6	250
4CX250M/ 8246	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.25	250	12	—		2000	350	0.25	0.0	300
	C	Radio-Frequency Power Amplifier and Oscillator	500	2000	0.25	250	12	2	250	2000	250	0.25	2.9	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	165	12	2		1500	250	0.2	3.6	250

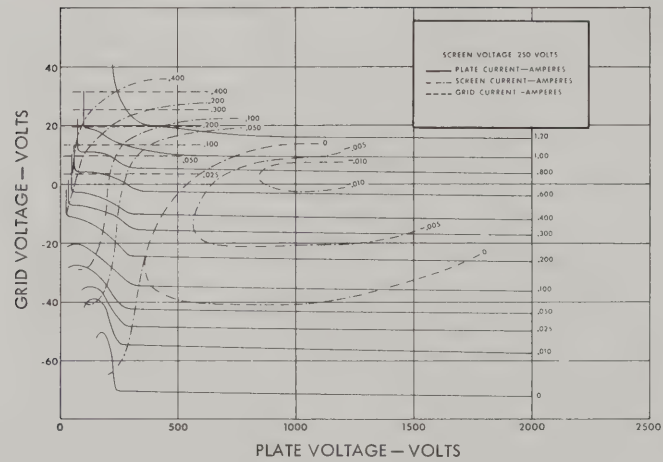


CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.3 to 3.0	25.0 to 29.0	4.2 to 5.2	0.05	2.813	1.64	4	Forced-Air	Special Coaxial	—
26.5	0.53 to 0.68	25.0 to 29.0	4.2 to 5.2	0.05	2.813	1.64	4	Forced-Air	Special Coaxial	—

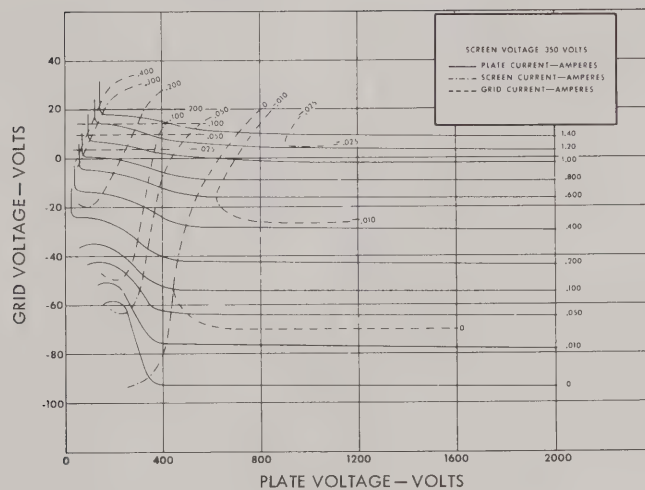
TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX250K/8245
4CX250M/8246



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX250K/8245
4CX250M/8246**



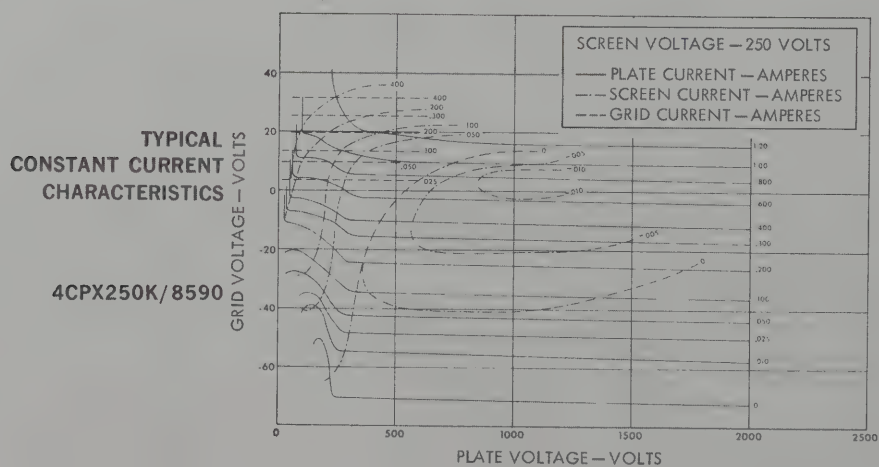
EXTERNAL ANODE



4CPX250K/
8590

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CPX250K/8590	C	Grid-Pulsed Amplifier 250 μ sec Pulses	500	5500	0.25	250	12	2	250	5500	1000	0.25	Duty 0.007	10,000



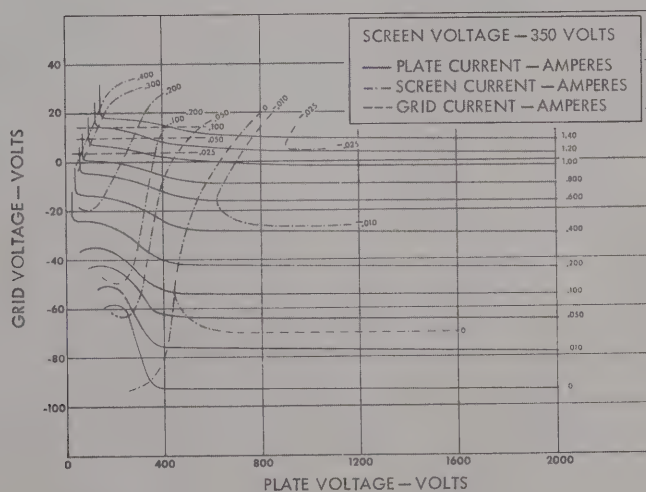
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
---------------------------	--------------------------	---------------	----------------	----------------------	-----------------	--------------	---------------------	---------	------	--------------------

(Grounded-Grid)

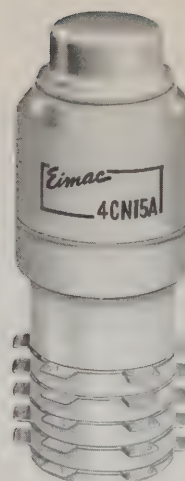
6.0	2.3 to 3.0	12.0 to 16.0	3.9 to 4.35	0.01	2.813	1.64	4	Forced-Air	Special Coaxial	—
-----	------------------	--------------------	-------------------	------	-------	------	---	------------	--------------------	---



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CPX250K/8590

EXTERNAL ANODE



4CN15A



4CX125C

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CN15A	C	Grid pulsed amp		2500	6.0 (ib)	15	12	2						
	C	Plate pulsed amp		7000 (eb)	6.0 (ib)	15	12	2	250					
	C	Pulse Modulator		4000	4.0 (ib)	15	12	2						
4CX125C	C	Radio-Frequency Power Amplifier and Oscillator	500	2000	0.25	125	12	2	250	2000	250	0.25	3.0	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	80	12	2		1500	250	0.2	3.6	225
4CX125F	C	Radio-Frequency Power Amplifier and Oscillator	500	2000	0.25	125	12	2	250	2000	250	0.25	3.0	390
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	80	12	2		1500	250	0.2	3.6	225
4CX300A/8167	AB ₁	Audio-Frequency Power Amplifier and Modulator		2000***	0.25	300	12	—		2500	350	0.5*	0.0	800*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	500	2000***	0.25	300	12	—		2500**	350	0.25	0.0	400
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.25	300	12	2	225	2500**	250	0.25	2.8	500
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.2	200	12	2		1500	250	0.2	1.7	235

* Two tubes

** May be increased by conduction cooling

*** Below 250 MHz



4CX125F



4CX300A/
8167

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.6 to 3.1	25.0 to 33.0	3.5 to 4.5	0.06	2.5	0.894	2.5	Convection or Conduction	Special Breech- block	Eimac SK-700 Series
6.0	2.6 to 3.1	25.0 to 33.0	3.5 to 4.5	0.06	2.5	1.25	3.5	Forced-Air	Special Breech- block	Eimac SK-700 Series
26.5	0.59 to 0.70	25.0 to 33.0	3.5 to 4.5	0.06	2.5	1.25	3.5	Forced-Air	Special Breech- block	Eimac SK-700 Series
6.0	2.6 to 3.1	25.0 to 33.0	3.5 to 4.5	0.06	2.5	1.65	4.0	Forced-Air	Special Breech- block	Eimac SK-700 Series

4CN15A
4CX125C
4CX125F
4CX300A/8167



4CN15A
4CX125C
4CX125F
4CX300A/8167





4CX300Y/
8561

EXTERNAL ANODE

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX300Y/ 8561	AB ₁	Audio-Frequency Power Amplifier and Modulator	110	2000	0.4	400	8	—	250	2000	400	0.75*	0.0	890*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2000	0.4	400	8	—		2000	400	0.375	0.0	415
	C	Radio-Frequency Power Amplifier and Oscillator		2000	0.4	400	8	1		2000	250	0.4	3.8	600
	C	Plate-Modulated Radio-Frequency Power Amplifier		1500	0.3	250	8	1		1500	250	0.3	1.7	300

*Two tubes

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

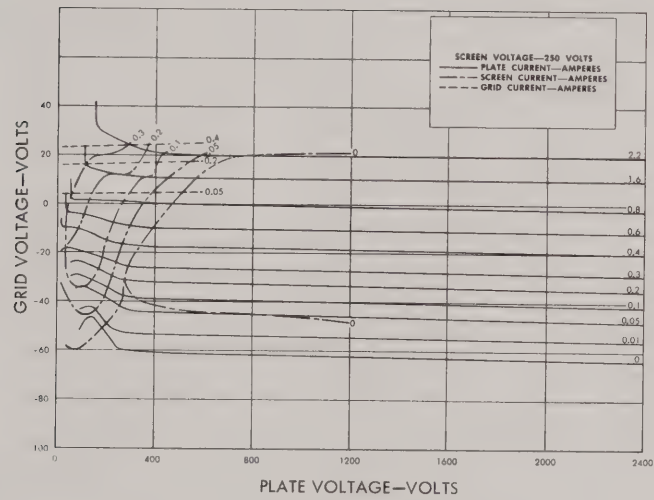
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	3.0 to 3.85	30.0 to 38.0	3.9 to 5.0	0.07	2.5	1.65	4	Forced-Air	Special Breech- block	Eimac SK-700 Series

4CX300Y/8561



TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX300Y/8561





4CX350A/
8321

EXTERNAL ANODE

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX350A/ 8321	AB ₁	Audio-Frequency Power Amplifier and Modulator	500	2500	0.4	350	8	2	250	2200	400	0.58*	0.0	770
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2500	0.4	350	8	2		2000	400	0.29	0.0	385
4CX350F/ 8322	AB ₁	Audio-Frequency Power Amplifier and Modulator	500	2500	0.4	350	8	2	250	2200	400	0.58*	0.0	770
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2500	0.4	350	8	2		2000	400	0.29	0.0	385
4CS250H	AB ₁	Audio-Frequency Power Amplifier and Modulator	—	2500	0.4	250**	8	2	250	1500	400	0.415*		375*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		2500	0.4	250**	8	2		2200	400	0.29		385

* Two tubes

** Heat sink temp less than 100°C



4CX350F/
8322



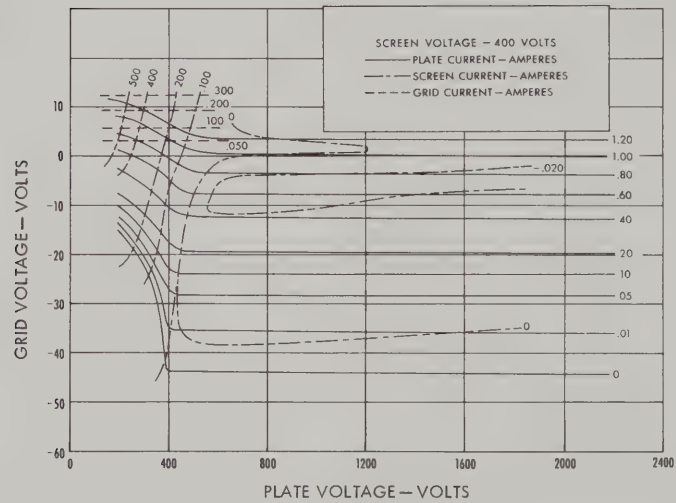
4CS250H

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	2.9 to 3.6	22.2 to 26.2	5.0 to 6.0	0.05	2.46	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series
26.5	0.66 to 0.81	22.2 to 26.2	5.0 to 6.0	0.05	2.46	1.64	4	Forced-Air	9-Pin Special	Eimac SK-600 Series
6.0	3.0	24.2	5.5	0.05	2.4	—	—	Conduction	B8-236 (JEDEC)	Eimac SK-660 Series

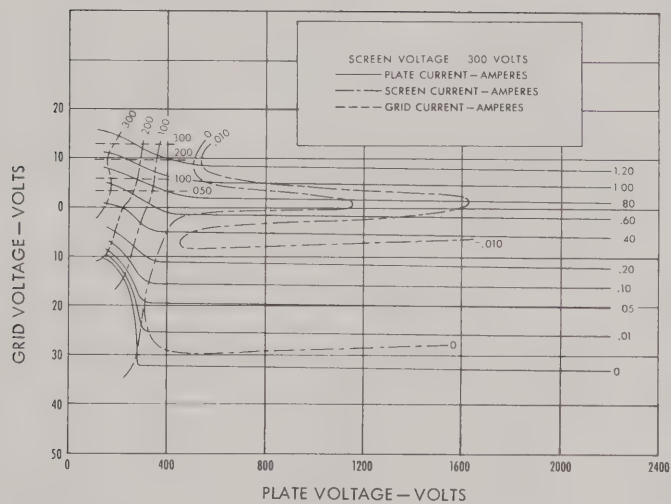
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX350A/8321
4CX350F/8322
4CS250H**



TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX350A/8321
4CX350F/8322
4CS250H



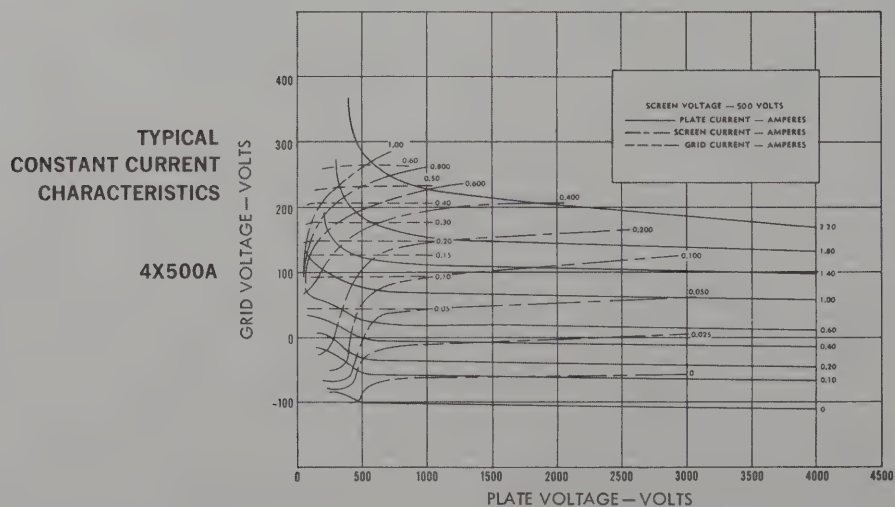
EXTERNAL ANODE



4X500A

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4X500A	BTV	Radio-Frequency Linear Amplifier TV Visual Service	220	3000	0.35	500	30	10	150	2400	500	0.4*	25.0*	600*
	C	Radio-Frequency Power Amplifier and Oscillator	120	4000	0.35	500	30	10		4000	500	0.315	5.0	835

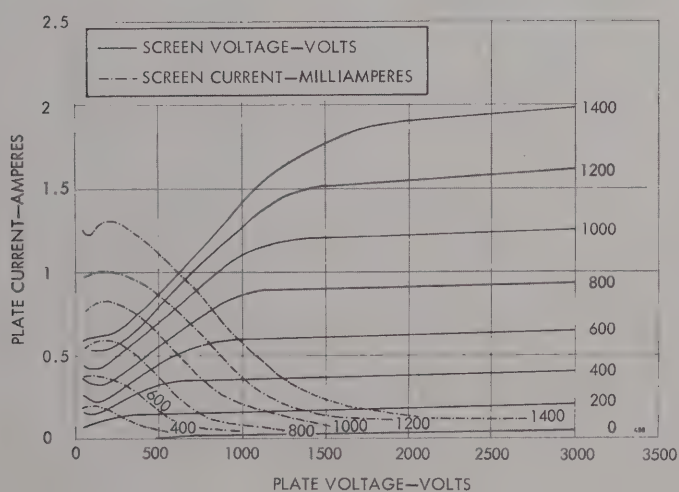


* Peak synchronizing level

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
FILAMENT 5.0	FILAMENT 12.2 to 13.7	10.6 to 14.4	4.9 to 6.9	0.1	4.75	2.625	1.7	Forced-Air	4-Pin Special	Eimac SK-900



TYPICAL
PLATE
CHARACTERISTICS

4X500A

EXTERNAL ANODE



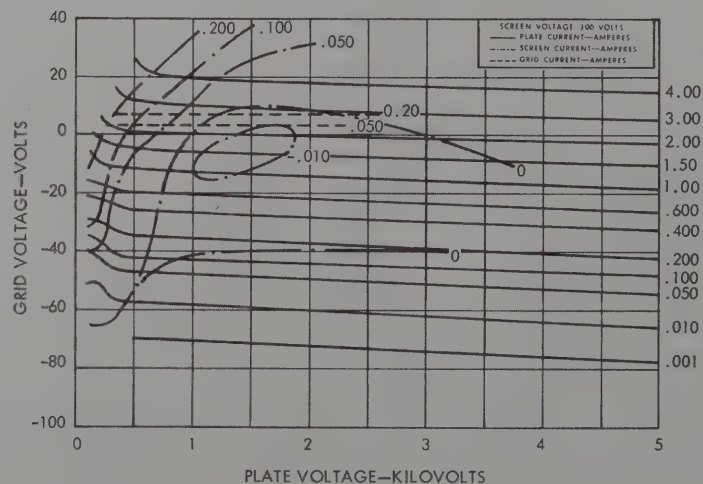
4CX600A

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION 150 Mhz				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX600A	C	Radio-Frequency Power Amplifier	—	3000	0.6	600	15	3	250	2000	300	0.6	10.0	800
4CW800A	C	Radio-Frequency Power Amplifier	—	3000	0.6	800	15	3	250	2000	300	0.6	10.0	800

TYPICAL CONSTANT CURRENT CHARACTERISTICS

4CX600A
4CW800A



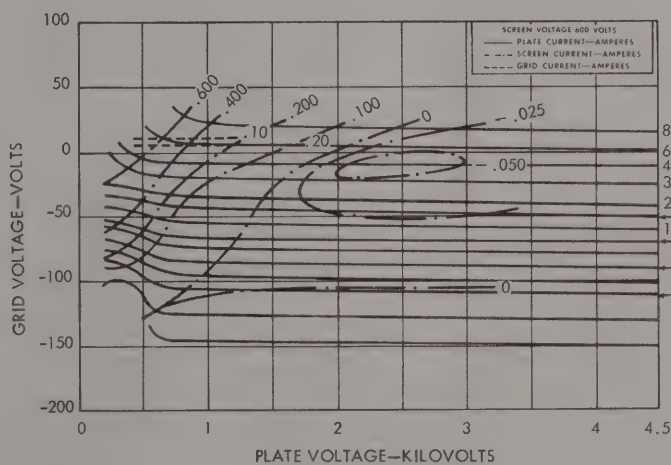
These tubes, designed for distributed amplifier service, feature high G_m , with four separate leads from base to active portion of the grid



4CW800A

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	4.0 to 4.7	42.0 to 48.0	4.8 to 5.8	Feed- Thru 0.2	2.2	2.1	—	Forced-Air	Special	—
6.0	4.35	45.0	5.13	0.2	3.0	2.0	—	Water and Forced-Air		—



TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX600A
4CW800A

EXTERNAL ANODE



4CX1000A/
8168

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID CURRENT (ma)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX1000A/ 8168	AB ₁	Audio-Frequency Power Amplifier and Modulator	110	3000	1.0	1000	12	5	250	3000	325	1.75*	0.0	3260*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		3000	1.0	1000	12	5		3000	325	0.875	0.0	1630
4CX1000K/ 8352	AB ₁	Radio-Frequency Linear Power Amplifier	—	3000	1.0	1000	12	5	250	2500	325	0.883	0.0	1250
											Measured PO - 145 MHz - 23 DB gain			
4CW2000A/ 8244	AB ₁	Audio-Frequency Power Amplifier and Modulator	110	3000	1.0	2000**	12	5	250	3000	325	1.8*	0.0	3260*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		3000	1.0	2000**	12	5		3000	325	0.9	0.0	1630
	AB ₁	Regulator Service		6000	1.0	2000**	12	5						

* Two tubes

** With water as a coolant



4CX1000K/
8352



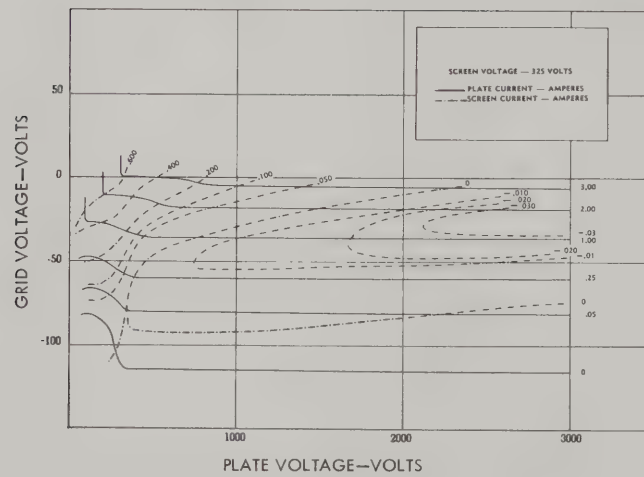
4CW2000A/
8244

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	8.1 to 9.9	77.0 to 90.0	11.0 to 13.0	0.02	3.65	3.37	27	Forced-Air	Special Breech- block	Eimac SK-800B Eimac SK-810B
6.0	10.5	84.0	12.0	0.02	3.65	3.36	28	Forced-Air	Special Breech- block	Eimac SK-820 Eimac SK-830
6.0	9.5 to 11.5	77.0 to 90.0	11.0 to 13.0	0.02	5.875	2.625	1.75 lb.	Water and Forced-Air	Special Breech- block	Eimac SK-800B Eimac SK-810B

**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX1000A/8168
4CX1000K/8352
4CW2000A/8244**



NOTES:



EXTERNAL ANODE

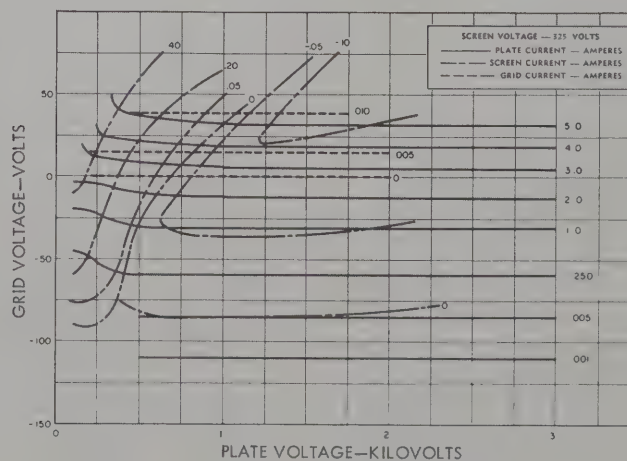
4CX1500B/
8660

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	MAXIMUM RATINGS							TYPICAL OPERATION				
			FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX1500B/ 8660	AB ₂	Radio-Frequency Linear Power Amplifier	—	3000	0.9	1500	12	1.0	250	2900	225	0.71	1.5	1100**
	AB ₁	Audio-Frequency Power Amplifier and Modulator	—	3000	0.9	1500	12	1.0		2900	325	1.69*	0.0	2774*

TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX1500B/8660



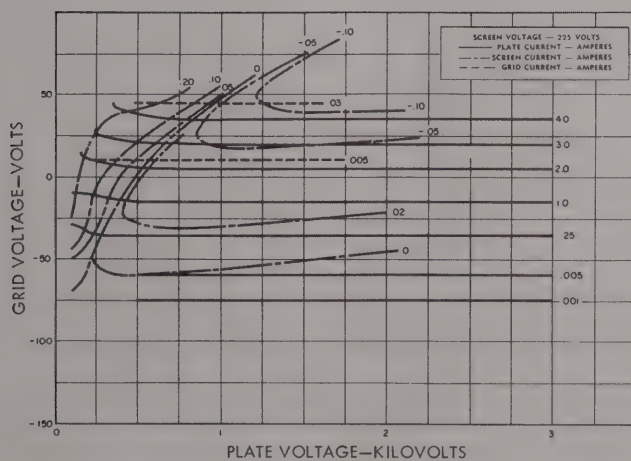
* Two tubes

** Typically this set of operating conditions
results in -43db 3rd order IM

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	COOLING	BASE	SOCKET/ CHIMNEY
6.0	9.0 to 11.0	75.0 to 88.0	10.8 to 12.8	0.03	4.8	3.37	27	Forced-Air	Special Breech- block	Eimac SK-800B Eimac SK-810B



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CX1500B/8660



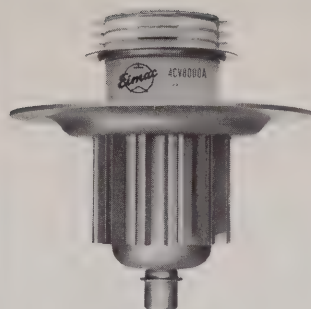
4CX3000A/
8169

EXTERNAL ANODE

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX3000A/ 8169	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	150	7000	2.0	3000	175	50		5000	850	1.65	0.0	5600
	C	Radio-Frequency Power Amplifier and Oscillator	150	7000	2.0	3000	175	50	250	7000	500	1.9	47.0	11,000
	C	Plate-Modulated Radio-Frequency Power Amplifier	150	5000	1.4	2000	175	50		5000	400	1.35	42.0	5500
4CV8000A	AB ₁	Audio-Frequency Power Amplifier and Modulator		7000	2.0	8000	175	50		6000	850	4.0*	0.0	14,500*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		7000	2.0	8000	175	50	250	6000	850	2.0	0.0	7250
	C	Radio-Frequency Power Amplifier and Oscillator		7000	2.0	8000	175	50		7000	500	1.9	47.0	11,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5000	1.4	5500	175	50		5000	400	1.35	42.0	5500

* Two tubes



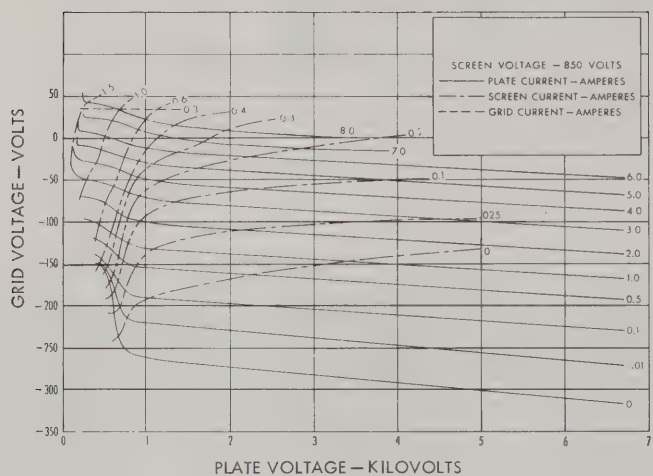
4CV8000A

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
Filament 9.0	Filament 39.5 to 43.5	120.0 to 140.0	10.5 to 14.5	Filament 1.4	7.9	4.63	5.5	Forced-Air	Special Breech- block	Eimac SK-1400
9.0	39.5 to 43.5	120.0 to 140.0	10.5 to 14.5	1.4	7.983	7.875	7.0	Vapor and Forced-Air	Special Breech- block	Eimac SK-1490

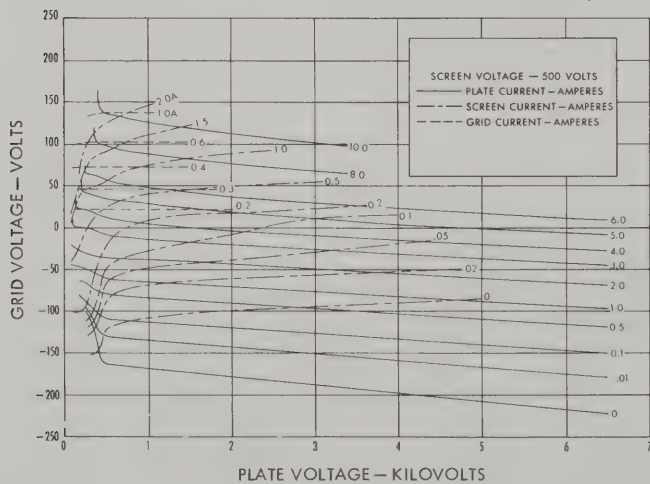
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CX3000A/8169



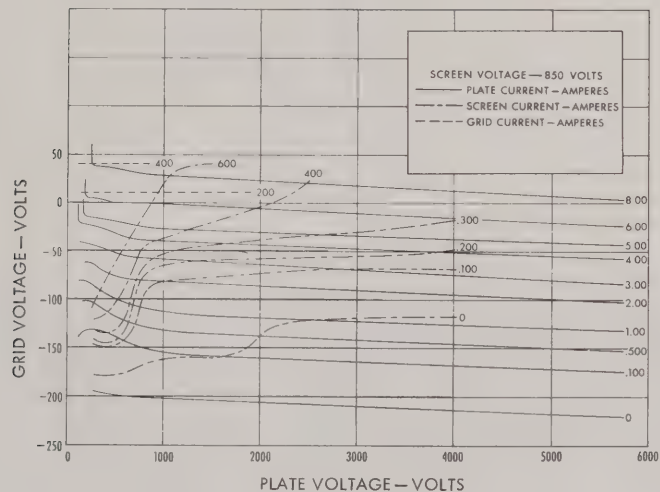
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CX3000A/8169



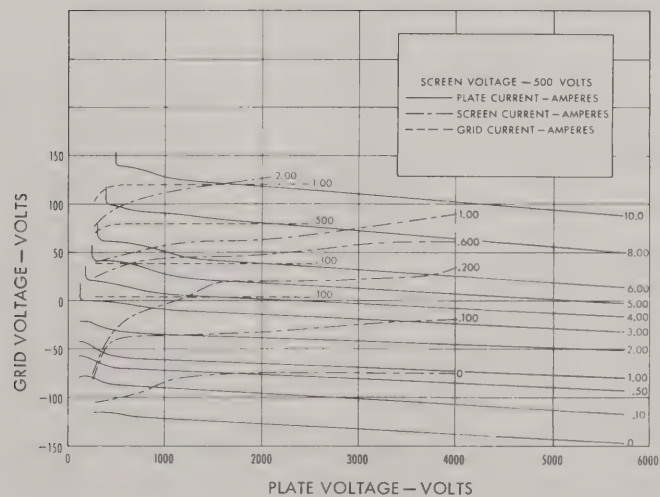
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CV8000A



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CV8000A



EXTERNAL ANODE



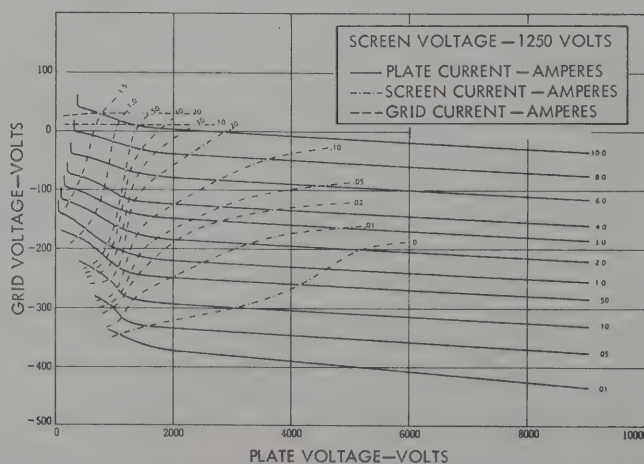
4CX5000R/
8170W

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX5000R/ 8170W	AB ₁	Audio-Frequency Power Amplifier and Modulator		7500	4.0	6000	250	—		7000	1250	3.65*	0.0	17,500*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	30	7500	4.0	6000	250	—	250	7500	1250	1.9	0.0	10,000
	C	Radio-Frequency Power Amplifier and Oscillator	110	7500	3.0	5000	250	75		7500	500	2.8	150.0	16,000
	C	Plate-Modulated Radio-Frequency Power Amplifier	30	5000	2.5	3500	250	75		5000	500	1.4	25.0	5800

TYPICAL CONSTANT CURRENT CHARACTERISTICS

4CX5000R/8170W

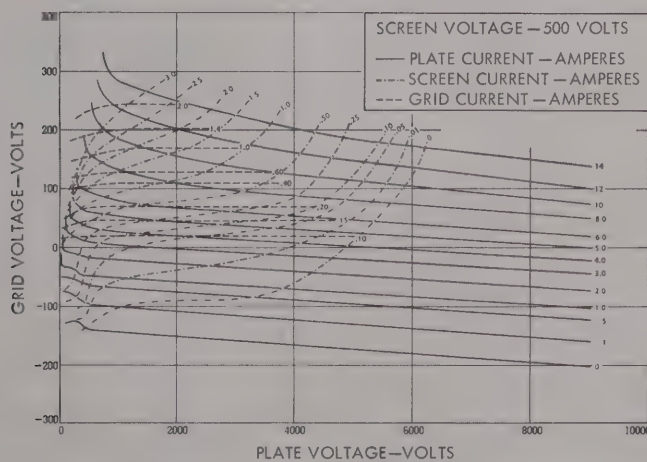


* Two tubes

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	73.0 to 78.0	108.0 to 122.0	18.0 to 23.0	1.0	9.125	4.938	9.5	Forced-Air	Special Concentric	Eimac SK-300A



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4CX5000R/8170W



4CX5000A/
8170

EXTERNAL ANODE

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX5000A/ 8170	AB ₁	Audio-Frequency Power Amplifier and Modulator		7500	4.0	6000	250	—		7000	1250	3.65*	0.0	17,500*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	30	7500	4.0	6000	250	—		7500	1250	1.9	0.0	10,000
	C	Radio-Frequency Power Amplifier and Oscillator	110	6500	3.0	5000	250	75	250	6500	500	2.3	250.0	10,000
	C	Plate-Modulated Radio-Frequency Power Amplifier	30	5500	2.5	3500	250	75		5000	500	1.4	25.0	5800
4CW10,000A	AB ₁	Audio-Frequency Power Amplifier and Modulator		7500	4.0	12,000	250	—		7500	1500	6.66*	0.0	31,900
	AB ₁	Radio-Frequency Linear Power Amplifier	30	7500	4.0	12,000	250	—		7500	1500	3.33	0.0	15,950
	C	Radio-Frequency Power Amplifier and Oscillator	30	7500	3.0	10,000	250	75	250	7500	500	2.8	150.0	16,000
	C	Plate-Modulated Radio-Frequency Power Amplifier	30	5000	2.5	6650	250	75		5000	500	2.4	120.0	8500

* Two tubes

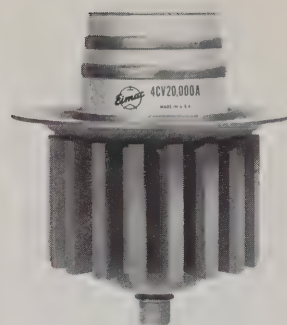


4CW10,000A

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	73.0 to 78.0	108.0 to 122.0	18.0 to 23.0	1.0	9.125	4.938	9.5	Forced-Air	Special Concentric	Eimac SK-300A
7.5	73.0 to 78.0	108.0 to 122.0	18.0 to 23.0	1.0	11.407	4.656	7.5	Water and Forced-Air	Special Concentric	Eimac SK-300A



EXTERNAL ANODE

4CV20,000A

PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CV20,000A	AB ₁	Audio-Frequency Power Amplifier and Modulator	30	7500	4.0	20,000	250	—	250	7500	1500	8.0*	0.0	35,000*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		7500	4.0	20,000	250	—		7500	1500	4.0	0.0	17,500
	C	Radio-Frequency Power Amplifier and Oscillator		7500	3.0	20,000	250	75		7500	500	3.0	155.0	17,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5000	2.5	13,500	250	75		5000	500	2.2	77.0	7750
4CX10,000D/8171	AB ₁	Audio-Frequency Power Amplifier and Modulator	30	7500	4.0	12,000	250	—	250	7500	1500	7.18*	0.0	34,300*
	AB ₁	Radio-Frequency Linear Power Amplifier		7500	4.0	12,000	250	—		7500	1500	3.59	0.0	17,150
	C	Radio-Frequency Power Amplifier and Oscillator		6500	3.0	10,000	250	75		6500	500	2.3	250.0	10,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		5500	2.5	6650	250	75		5000	500	2.4	120.0	8500

* Two tubes



4CX10,000D/
8171

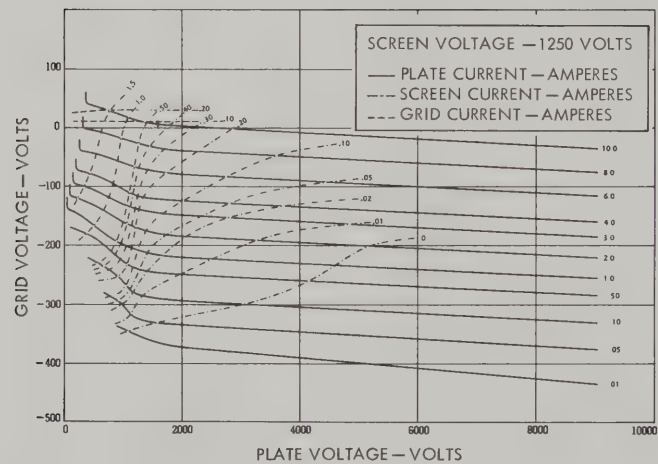
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
7.5	73.0 to 78.0	108.0 to 122.0	18.0 to 23.0	1.0	9.125	7.75	21.0	Vapor and Forced-Air	Special Concentric	Eimac SK-310 with BR-200 Boiler
7.5	73.0 to 78.0	108.0 to 122.0	18.0 to 23.0	1.0	9.13	7.05	12.2	Forced-Air	Special Concentric	Eimac SK-300A

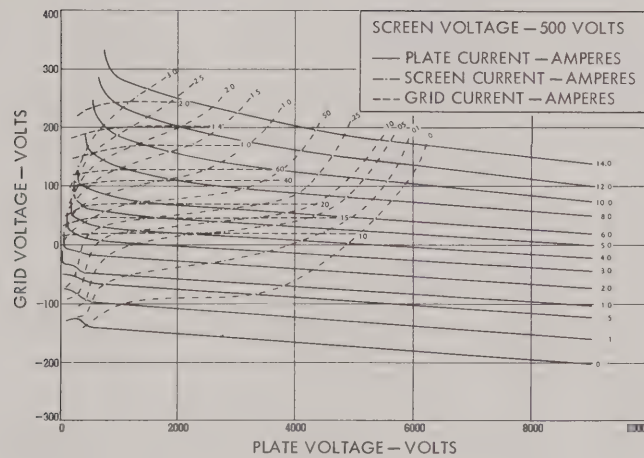
TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

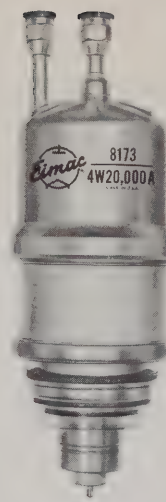
4CX5000A/8170
4CW10,000A
4CV20,000A
4CX10,000D/8171



TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

4CX5000A/8170
4CW10,000A
4CV20,000A
4CX10,000D/8171



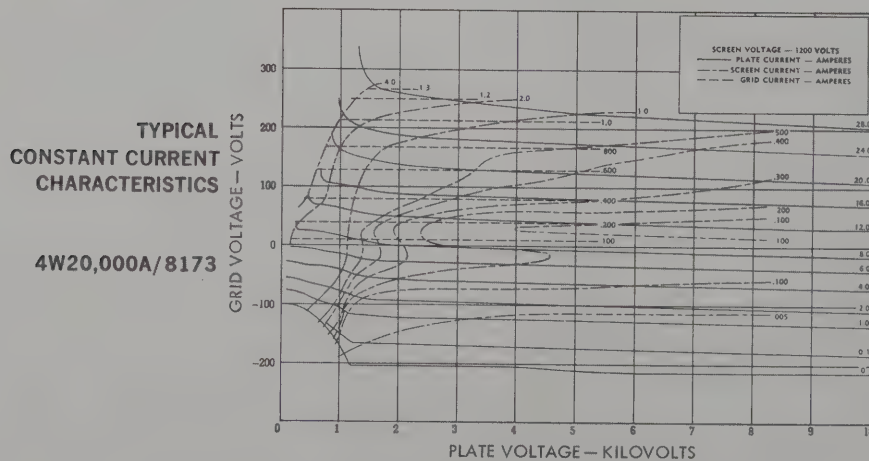


4W20,000A/
8173

EXTERNAL ANODE

PERFORMANCE DATA

TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	MAXIMUM RATINGS							TYPICAL OPERATION				
			FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4W20,000A/ 8173	B _{TV} C	Radio-Frequency Linear Amplifier, TV Visual Service	220	8000	15.0	20,000	200	60	150	7000	1100	6.0	500.0*	26,000*
				8000	15.0	20,000	200	60		7000	900	3.4	830.0	13,000



* Peak of synch. pulse

CHARACTERISTICS

CAPACITANCE (GROUNDED GRID)										
FILAMENT VOLTAGE (volts) STARTING	FILAMENT CURRENT (amps) STARTING	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT	COOLING	BASE	SOCKET/ CHIMNEY
10.0	27.0 to 31.0	75.0 to 87.0	21.0 to 25.5	0.06	14.0	5.03	—	Water	Special Concentric	—

BOMBARDED CATHODE

Volts	Amps	Power Watts
1500 NOM.	1.9 NOM.	1800 to 2500

NOTE: Adjust cathode voltage for required wattage.
Use no more bombarder power than necessary for
stable operation

EXTERNAL ANODE



4CX15,000A/
8281

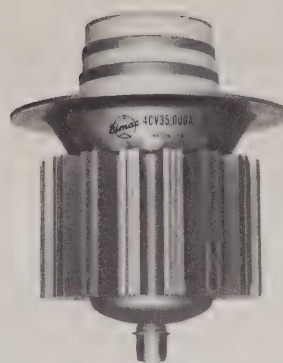
PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX15,000A/ 8281	AB ₁	Audio-Frequency Power Amplifier and Modulator	110	10,000	6.0	15,000	450	200	250	10,000	1500	8.5*	0.0	57,000*
	AB ₁	Radio-Frequency Linear Power Amplifier		10,000	6.0	15,000	450	200		10,000	1500	4.25	0.0	28,500
	C	Radio-Frequency Power Amplifier and Oscillator		10,000	5.0	15,000	450	200		10,000	750	4.55	220.0	36,500
	C	Plate-Modulated Radio-Frequency Power Amplifier		8000	4.0	10,000	450	200		8000	750	3.65	150.0	23,500
4CW25,000A	AB ₁	Radio-Frequency Linear Power Amplifier-SSB	110	10,000	6.0	25,000	450	200	250	10,000	1500	4.25	—	28,500
	C	Radio-Frequency Power Amplifier and Oscillator		10,000	5.0	25,000	450	200		7500	750	4.65	220.0	26,700
4CV35,000A	AB ₁	Audio-Frequency Power Amplifier and Modulator	110	10,000	6.0	35,000	450	200	250	10,000	1500	10.7	0.0	66,000
	C	Radio-Frequency Power Amplifier and Oscillator		10,000	5.0	35,000	450	200		10,000	750	4.8	225.0	38,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		8000	4.0	23,000	450	200		8000	750	3.65	150.0	23,500

* Two tubes



4CW25,000A



4CV35,000A

CHARACTERISTICS

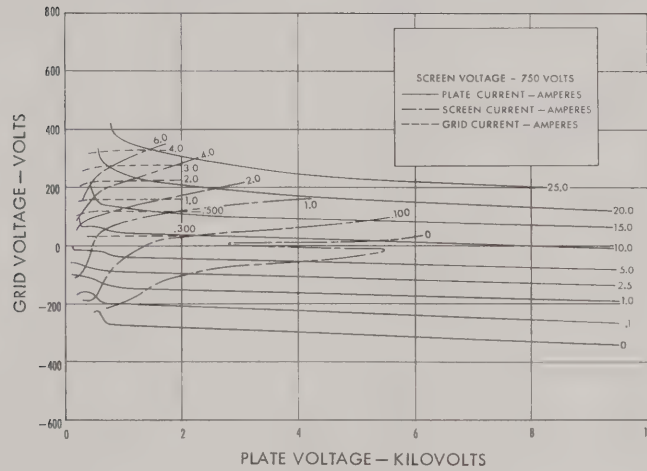
CAPACITANCE (GROUNDED CATHODE)										
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
6.3	152.0 to 168.0	148.5 to 161.5	22.0 to 27.0	2.0	9.44	7.58	12.8	Forced-Air	Special Concentric	Eimac SK-300A
6.3	152.0 to 168.0	162.0	25.0	2.0	12.2	4.6	—	Water and Forced-Air	Special Concentric	Eimac SK-300 Eimac SK-300A
6.3	152.0 to 168.0	148.5 to 161.5	22.0 to 27.0	2.0	9.125	7.88	24.0	Vapor and Forced-Air	Special Concentric	Eimac SK-310 with BR-200 Boiler

4CX15,000A/8281
4CW25,000A
4CV35,000A



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX15,000A/8281
4CW25,000A
4CV35,000A**



EXTERNAL ANODE



4CX35,000C/
8349

PERFORMANCE DATA

MAXIMUM RATINGS										TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CX35,000C/ 8349	AB ₁	Audio-Frequency Power Amplifier and Modulator	30	20,000	15.0	35,000	1750	500	250	15,000	1500	15.1*	0.0	165,000
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		20,000	15.0	35,000	1750	500		15,000	1500	7.55	0.0	82,500
	C	Radio-Frequency Power Amplifier and Oscillator		20,000	15.0	35,000	1750	500		20,000	500	6.35	230.0	110,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		14,000	15.0	23,000	1750	500		14,000	500	6.6	350.0	69,000
4CV100,000C/ 8351	AB ₁	Audio-Frequency Power Amplifier and Modulator	30	20,000	15.0	100,000	1750	500	250 (110 Anode Flange)	18,000	1500	20.0*	0.0	246,400*
	AB ₁	Radio-Frequency Linear Power Amplifier-SSB		20,000	15.0	100,000	1750	500		18,000	1500	10.0	0.0	123,200
	C	Radio-Frequency Power Amplifier and Oscillator		20,000	15.0	100,000	1750	500		17,500	1500	11.8	125.0	168,000
	C	Plate-Modulated Radio-Frequency Power Amplifier		17,500	15.0	66,500	1750	750		16,000	750	10.0	870.0	138,500
4CW100,000D		Audio-Frequency Power Amplifier and Modulator	30	20,000	15.0	100,000	1750	—		18,000	1500	20.0*	—	246,000*
		Radio-Frequency Linear Power Amplifier-SSB		20,000	15.0	100,000	1750	—		18,000	1500	10.0		123,200
		Radio-Frequency Power Amplifier and Oscillator		20,000	15.0	100,000	1750	500		17,500	1500	11.8	125.0	168,000
		Plate-Modulated Radio-Frequency Power Amplifier		17,500	15.0	66,500	1750	500		16,000	750	10.0	870.0	138,500

* Two tubes



4CV100,000C/
8351



4CW100,000D

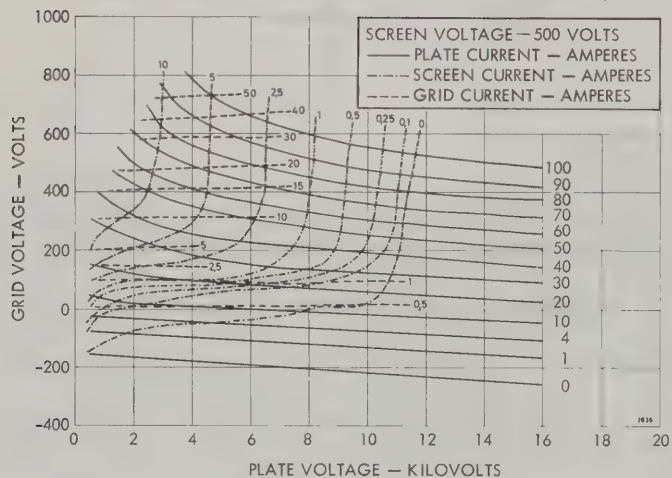
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
10.0	300.0	420.0 to 500.0	48.0 to 58.0	1.5 to 3.2	15.0	9.75	50	Forced-Air	Special Concentric	Eimac SK-1500
10.0	300.0	420.0 to 500.0	48.0 to 58.0	1.5 to 3.2	17.0	10.0	95	Vapor and Forced-Air	Special Concentric	Eimac SK-1510 with BR-500 BR-300 Boiler
10.0	300.0	420.0 to 500.0	48.0 to 58.0	1.5 to 3.2	18.0	8.0	—	Water and Forced-Air	Special Concentric	Eimac SK-1510

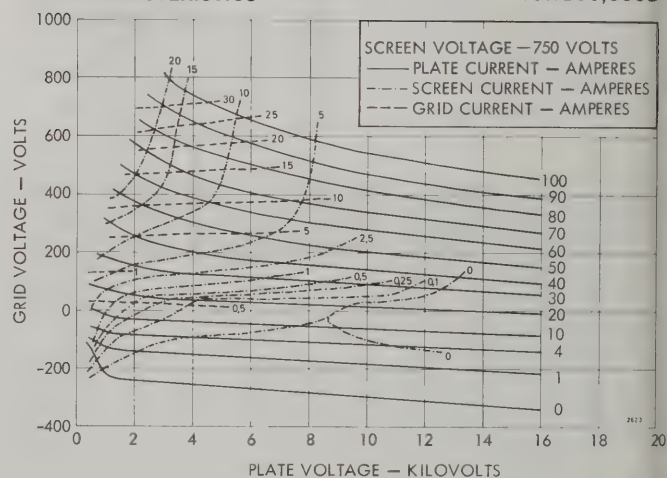
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



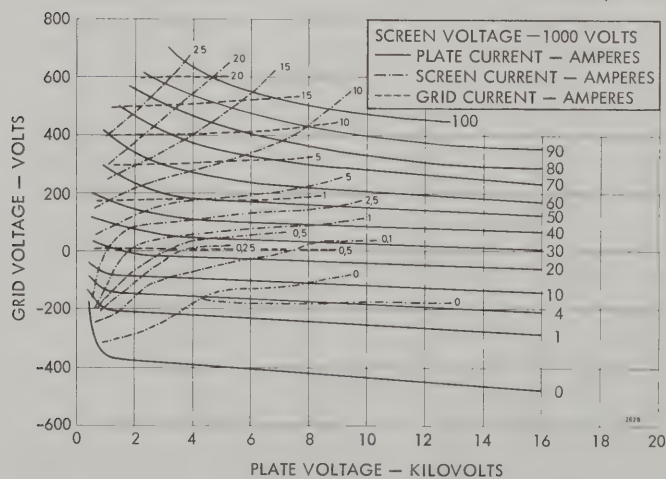
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



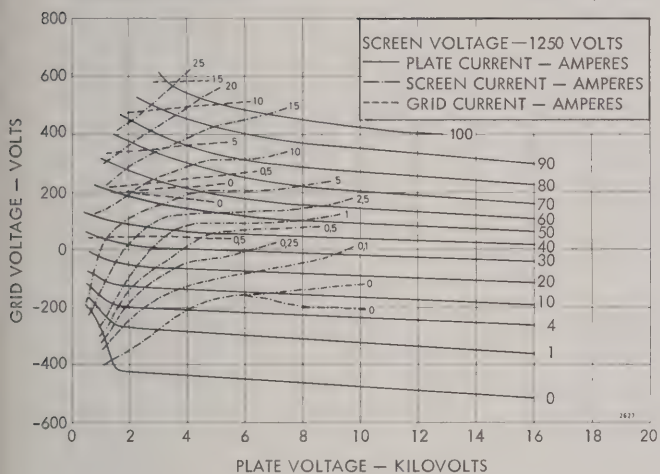
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



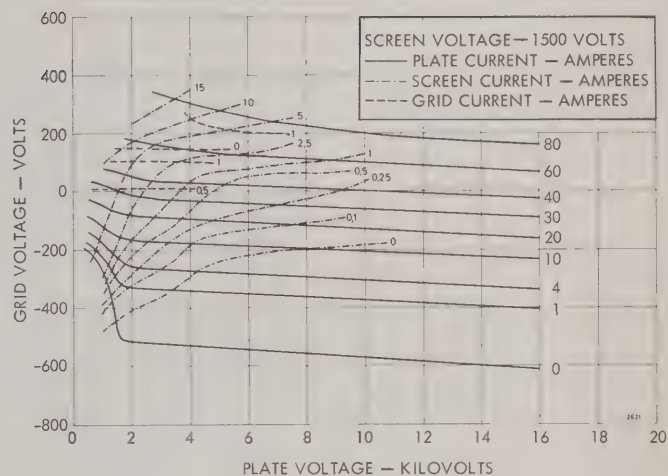
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



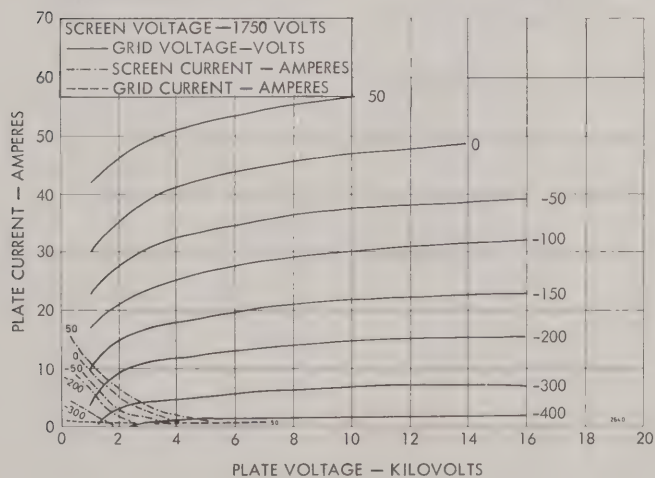
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



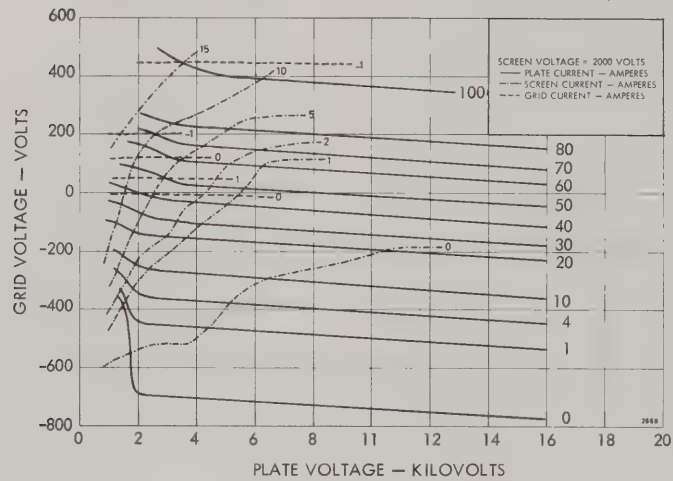
**TYPICAL
PLATE
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



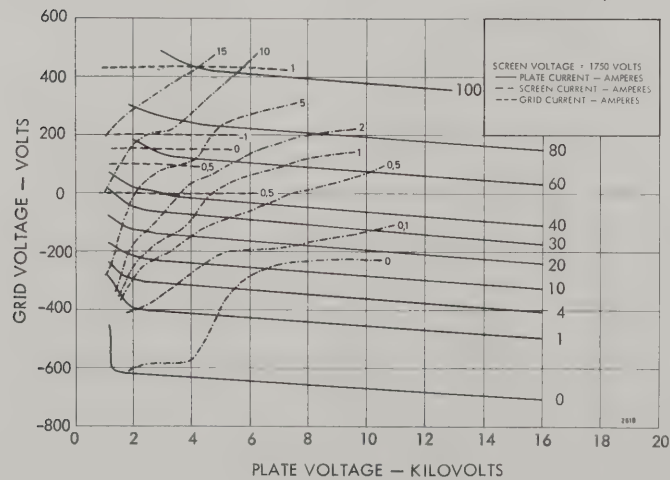
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**



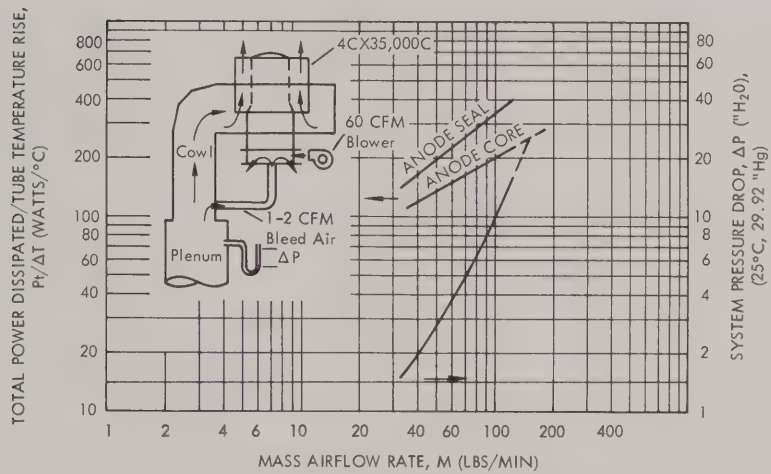
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

**4CX35,000C/8349
4CV100,000C/8351
4CW100,000D**

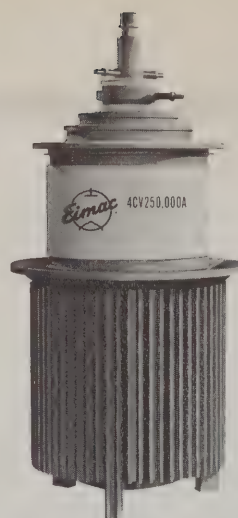


4CX35,000C/8349

EIMAC 4CX35,000C — Base-To-Anode Cooling Airflow Requirements
Separate Base Cooling Required.



EXTERNAL ANODE



4CV250,000A

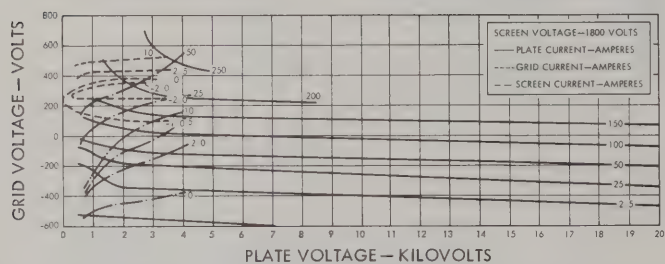
PERFORMANCE DATA

			MAXIMUM RATINGS							TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQ FOR MAX RATING (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4CV250,000A		Audio-Frequency Power Amplifier and Modulator	30	25,000	40	250,000	3500			15,000	1800	37.0	—	420,000
		Radio-Frequency Linear Power Amplifier-SSB		25,000	40	250,000	3500		250 (130 Anode Flange)	22,000	1800	17.5	—	307,000
		Radio-Frequency Power Amplifier and Oscillator		25,000	50	250,000	3500	3500		24,000	800	30.4	2200.0	600,000
		Plate-Modulated Radio-Frequency Power Amplifier		18,000	40	165,000	3500	1500		14,000	800	29.0	2500.0	292,000

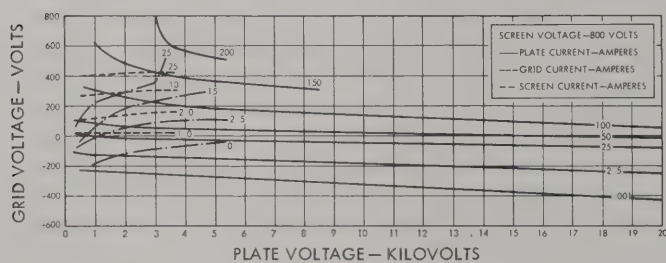
CHARACTERISTICS

		CAPACITANCE (GROUNDED CATHODE)								
HEATER VOLTAGE (volts)	HEATER CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	COOLING	BASE	SOCKET/ CHIMNEY
12.0	640.0	875.0	115.0	1.2	27.5	13.0	180	Vapor and Water	Special Concentric	SK-1700 Series accessories with BR-600 Boiler

4CV250,000A

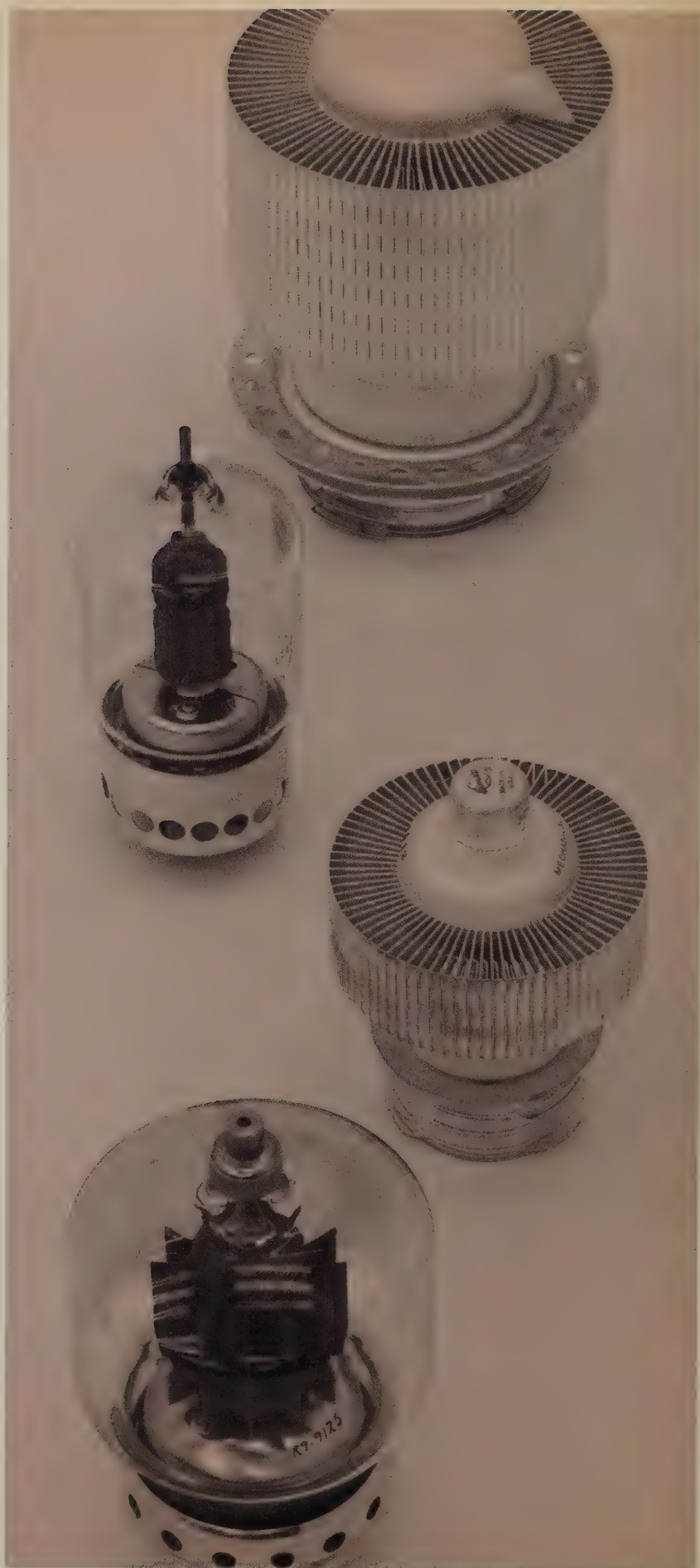


4CV250,000A



PENTODES

PENTODES



PENTODES

The following brief descriptions cover unique characteristics of Pentodes designed for specific applications.

These data should be used as aids in systems design where tube requirements are generally firm.

5-500A

A compact, ruggedly-constructed radial-beam power pentode, for use as an amplifier, oscillator or modulator. Long service life is assured by increased filament power.

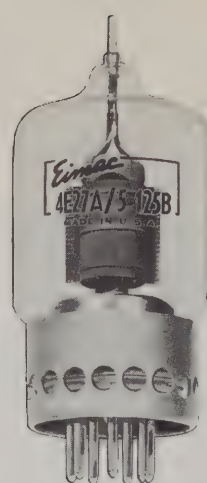
5CX1500A

A ceramic-metal pentode using a mesh thoriated tungsten filament designed primarily for linear amplifier service. High-gain and low-distortion characteristics make it especially suitable for single-sideband applications.

5CX3000A

A ceramic-metal pentode for linear amplifier service. High-gain and low-distortion characteristics make it especially suitable for single-sideband applications.

INTERNAL ANODE



4E27A/
5-125B

PERFORMANCE DATA

			MAXIMUM RATINGS								TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQUENCY FOR MAXIMUM RATINGS (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SUPPRESSOR DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
4E27A/ 5-125B	AB ₁	Audio-Frequency Power Amplifier and Modulator		4000	0.2	125	20	20	—		2500	500	0.22*	0.0	300*
	C	Radio-Frequency Power Amplifier and Oscillator-Zero Suppressor Volts	75	4000	0.2	125	20	20	5	225	3000	500	0.167	1.9	375
	C	Plate Modulator Radio-Frequency Power Amplifier Zero Suppressor Volts		2500	0.16	85	20	20	5		2500	500	0.152	2.0	295
	C	Suppressor-Modulator, Radio-Frequency Amplifier		4000	0.2	125	20	20	5		3000	400	0.06	1.2	75

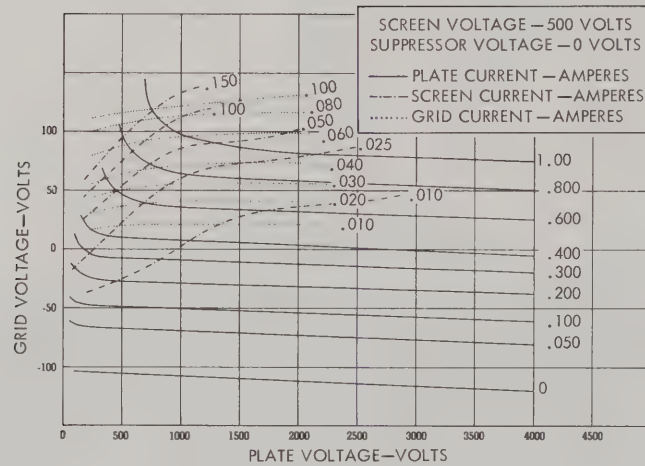
* Two tubes
(Peak audio suppressor voltage for 100% mod., 350v)

CHARACTERISTICS

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	CAPACITANCE (GROUNDED CATHODE)		FEED THROUGH (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
		INPUT (pF)	OUTPUT (pF)							
5.0	7.0 to 8.0	8.7 to 12.3	3.5 to 5.9	0.1	Convection	6.188	2.75	6	7-Pin Metal Shell	Johnson 122-237 —*— Plus Eimac HR-5

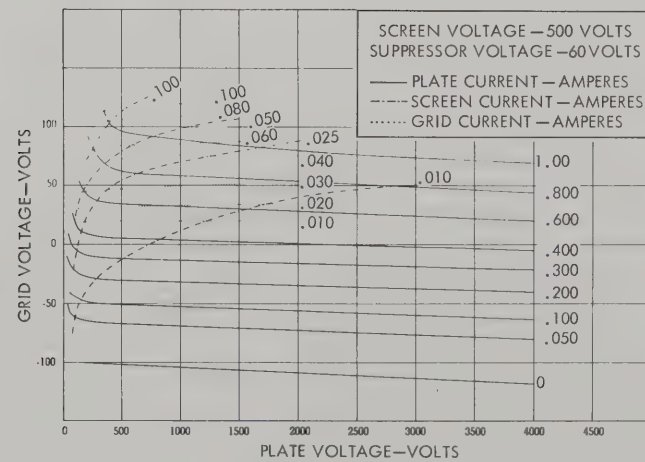
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4E27A/5-125B



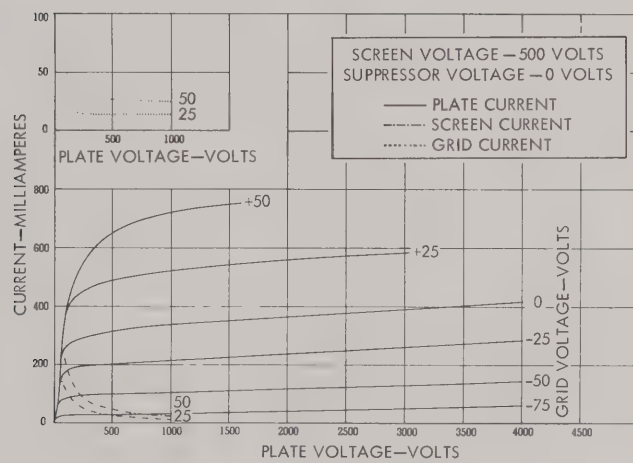
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4E27A/5-125B



**TYPICAL
CONSTANT GRID VOLTAGE
CHARACTERISTICS**

4E27A/5-125B



INTERNAL ANODE

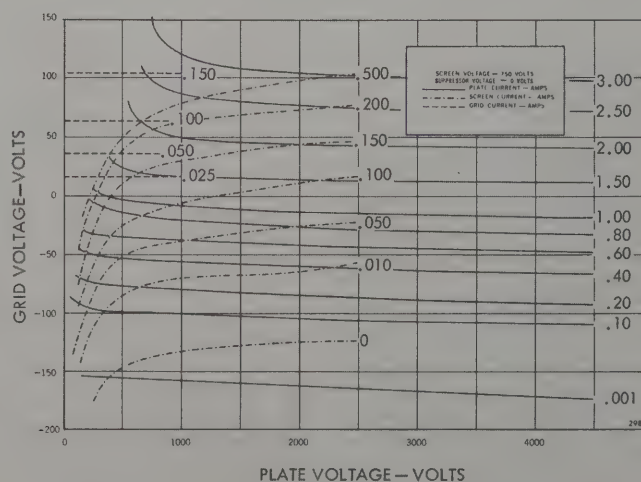


PERFORMANCE DATA

MAXIMUM RATINGS											TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQUENCY FOR MAXIMUM RATINGS (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SUPPRESSOR DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
5-500A	AB	Audio-Frequency Power Amplifier and Modulator	110	4000	0.45	500	—	35	12	200	4000	750	0.645*	0.0	1664*
	AB ₁	Radio-Frequency Linear Amplifier		4000	0.45	500	—	35	—		4000	750	0.322	—	832
	C	Radio-Frequency Power Amplifier and Oscillator		4000	0.45	500	—	35	12		4000	500	0.450	14.0	1300
	C	Plate-Modulated Radio-Frequency Power Amplifier		4000	0.34	330	—	35	12		3500	500	0.305	7.0	780

TYPICAL
CONSTANT CURRENT
CHARACTERISTICS

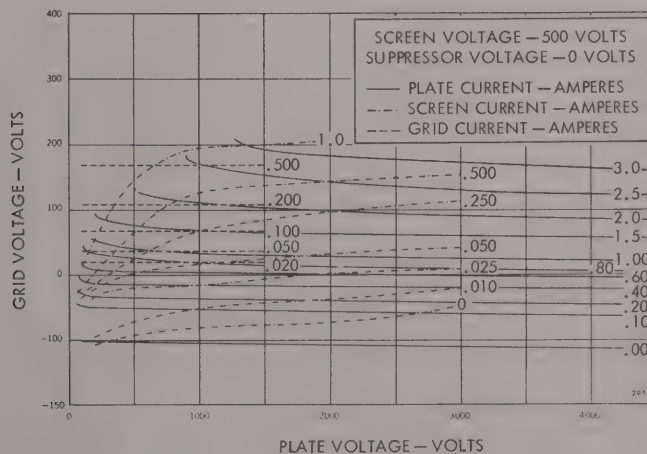
5-500A



*Two tubes

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
10.0	10.2	15.0 to 19.0	9.5 to 12.0	GRID- PLATE 0.1	Forced-Air	7.0	3.56	11	5-Pin Metal Shell	Eimac SK-400 Eimac SK-410 — — — Plus Eimac HR-6



**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

5-500A

EXTERNAL ANODE



5CX1500A

PERFORMANCE DATA

		MAXIMUM RATINGS										TYPICAL OPERATION			
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQUENCY FOR MAXIMUM RATINGS (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SUPPRESSOR DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
5CX1500A	AB ₁₋₂	Audio-Frequency Power Amplifier and Modulator	110	4000	1.0	1500	25	75	25	250	3800	500	1.33*	0.0	3220*
	AB ₁₋₂	Radio-Frequency Linear Amplifier		4000	1.0	1500	25	75	25		4000	500	0.69	0.0	1785
	C	Radio-Frequency Power Amplifier and Oscillator		5000	1.0	1500	25	75	25		4500	500	0.9	9.0	3180
	C	Plate-Modulated Radio-Frequency Power Amplifier		3500	0.8	1000	25	75	25		3200	500	0.8	10.0	1958

* Two tubes

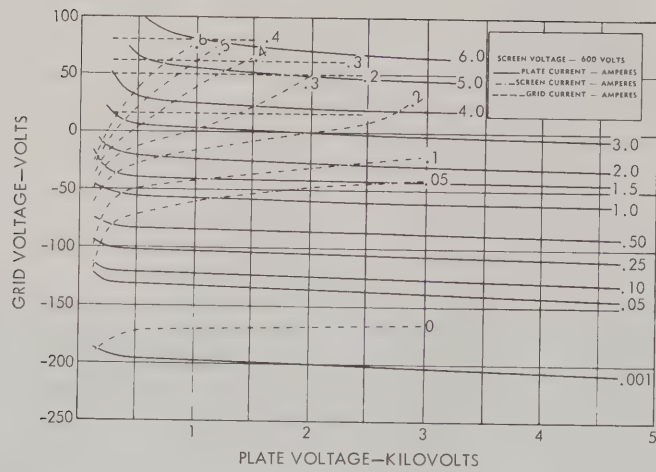
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
5.0	40.0	77.0	16.0	0.11	Forced-Air	5.0	3.4	30	Special Ring-and Breech- lock	Eimac SK-840

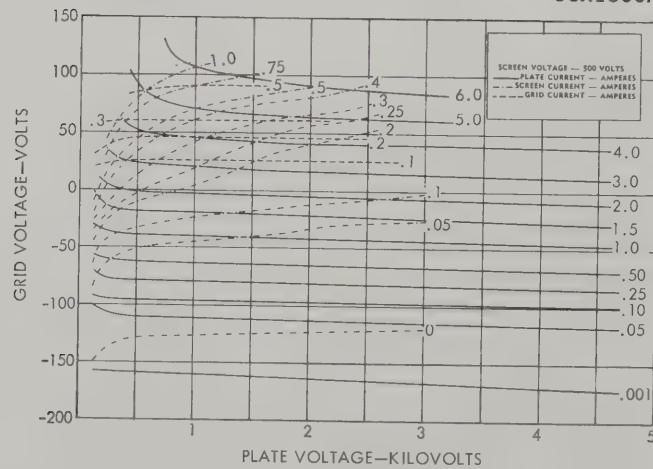
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

5CX1500A



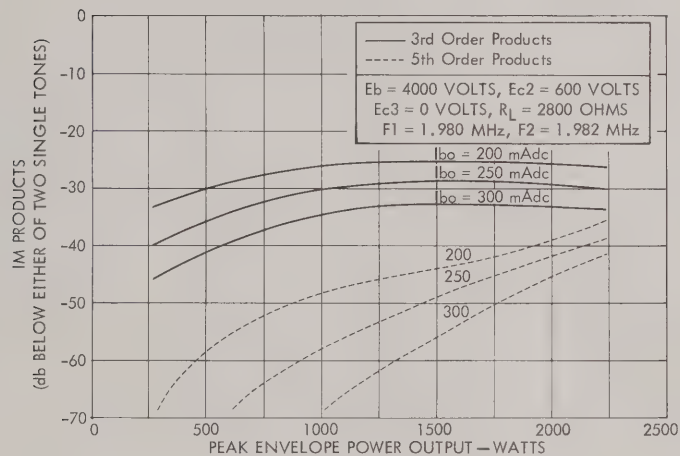
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

5CX1500A



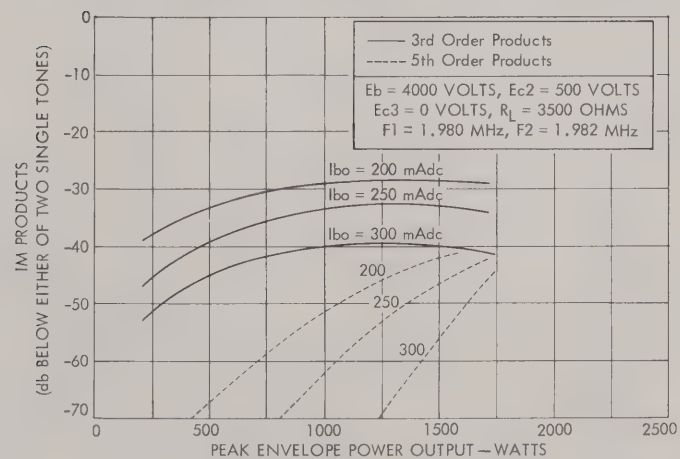
**IM PRODUCTS vs POWER OUTPUT
(AS A FUNCTION OF
ZERO-SIGNAL PLATE CURRENT)**

5CX1500A



**IM PRODUCTS vs POWER OUTPUT
(AS A FUNCTION OF
ZERO-SIGNAL PLATE CURRENT)**

5CX1500A



EXTERNAL ANODE



5CX3000A

PERFORMANCE DATA

			MAXIMUM RATINGS								TYPICAL OPERATION				
TUBE TYPE	CLASS OF OPERATION	TYPE OF SERVICE	FREQUENCY FOR MAXIMUM RATINGS (MHz)	PLATE VOLTAGE (volts)	PLATE CURRENT (amps)	PLATE DISS (watts)	SUPPRESSOR DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	SEAL TEMP (°C)	PLATE VOLTAGE (volts)	SCREEN VOLTAGE (volts)	PLATE CURRENT (amps)	DRIVE PWR (watts)	OUTPUT PWR (watts)
5CX3000A	AB ₁	Audio-Frequency Power Amplifier and Modulator		7000	2.0	4000	100	175	—		6000	850	2.6*	—	11,000*
	AB ₁	Radio-Frequency Power Amplifier	150	7000	2.0	4000	100	175	50	250	6000	850	1.3	—	5500**
	C	Radio-Frequency Power Amplifier		5000	2.0	4000	100	175	50		5000	500	1.9	41.0	7600

* Two tubes

**NOTE: Typically this set of operating conditions result in -40 db 3rd order IM and -50 db 5th order IM. Power output is useful power to load.

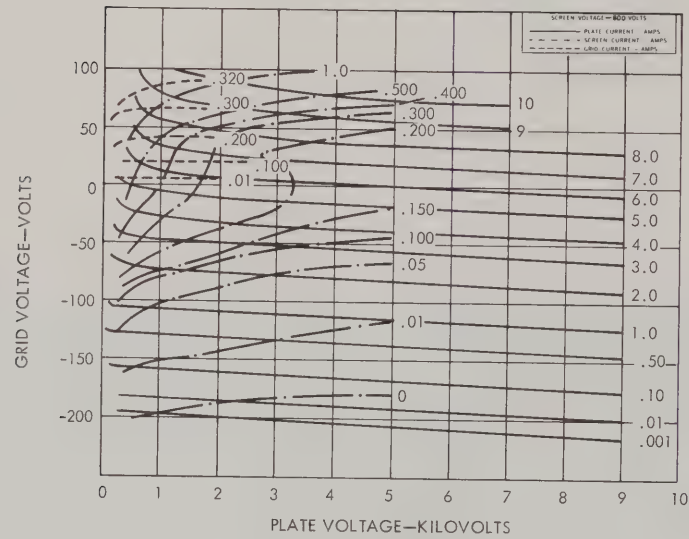
CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED THROUGH (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
9.0	39.5 to 43.5	125.0 to 145.0	18.0 to 24.0	0.6	Forced-Air	6.838	4.625		Special Ring-and Breech- lock	Eimac SK-1420

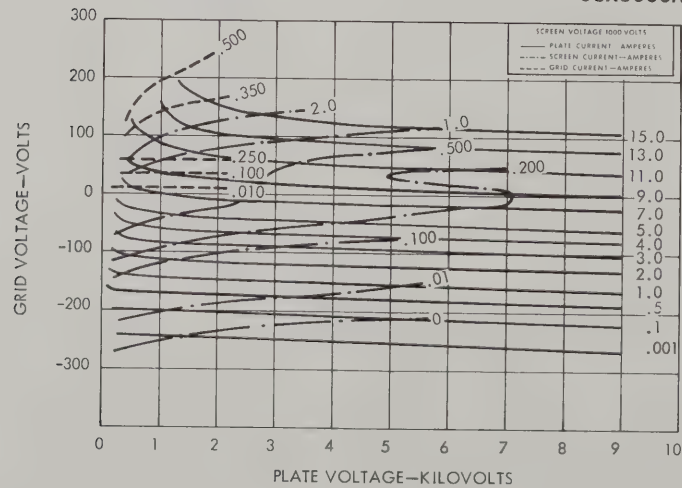
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

5CX3000A



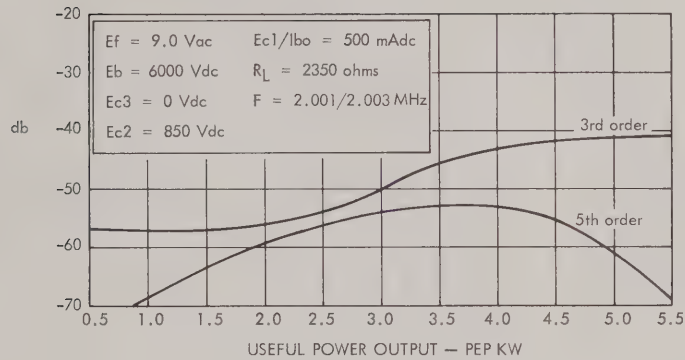
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

5CX3000A



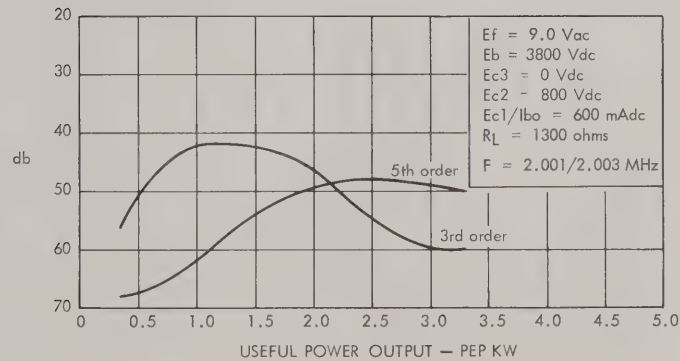
**TYPICAL
INTERMODULATION
DISTORTION DATA**

5CX3000A



**TYPICAL
INTERMODULATION
DISTORTION DATA**

5CX3000A



NOTES:

**PULSE
MODULATORS**

PULSE MODULATORS

PULSE
MODULATORS



PULSE MODULATORS

The following brief descriptions cover unique characteristics of Pulse Modulators designed for specific applications.

These data should be used as aids in systems design where tube requirements are generally firm.

4PR60B/8252

A high-vacuum, radial-beam tetrode for pulse modulator service in circuits employing resistive loads.

4PR400A/8188

A compact, high-vacuum, radial-beam tetrode incorporating a pyrovac plate and non-emitting grids, intended for pulse-modulator service. Recommended for use in new equipments whenever long pulse lengths, high duty factors, or high voltages preclude the use of tubes employing oxide-coated cathodes.

4PR1000A/8189

A compact, high-vacuum, radial-beam tetrode incorporating a pyrovac plate and non-emitting grids, intended for pulse-modulator service. This heavy-duty pulse modulator is recommended for use in new equipments where high voltage, high current, or high duty preclude the use of tubes employing oxide-coated cathodes.

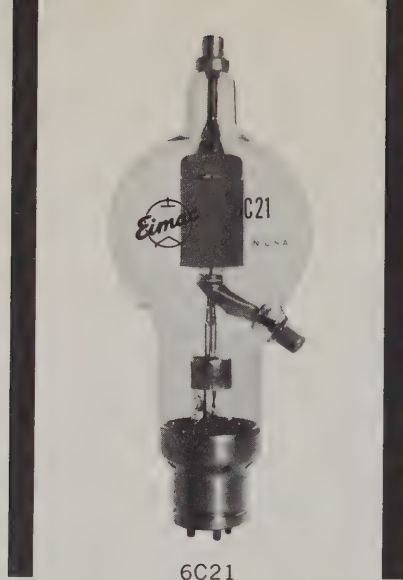
4PR1000B

A high-power pulse tetrode with electrical characteristics the same as those of the 4PR1000A. The 4PR1000B is specially resistant to shock and vibration. It was developed for use in Sonar amplifiers in shipboard environment.

4PR250C

A 50-kilovolt tetrode for use in pulse-modulator and switch-tube applications. The 4PR250C is capable of supplying pulses of four amperes and nearly 50 kilovolts to a resistive load. It is recommended for use as a capacitor discharge switch in floating deck modulator circuits.

INTERNAL ANODE

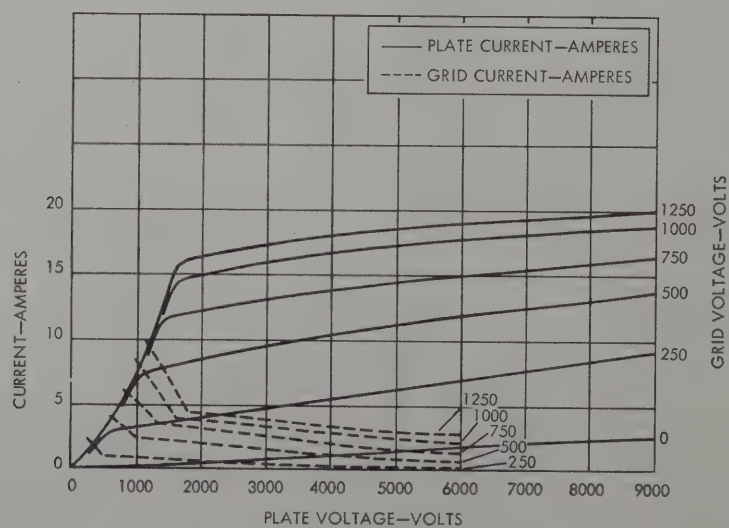


PERFORMANCE DATA

TUBE TYPE	MAXIMUM RATINGS					TYPICAL OPERATION					
	PLATE VOLTAGE (Kv)	PEAK PLATE CURRENT (amps)	PLATE DISS (watts)	SEAL TEMP (°C)	GRID DISS (watts)	PLATE VOLTAGE (Kv)	PULSE PLATE VOLTAGE (Kv)	PULSE PLATE CURRENT (amps)	PEAK DRIVE PWR (Kw)	PEAK OUTPUT PWR (Kw)	DUTY FACTOR
6C21	30	15	300	225	50	28	25	15	7.5	375	0.002

TYPICAL CONSTANT GRID VOLTAGE CHARACTERISTICS

6C21



CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	PLATE FILAMENT (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (lb.)	BASE	SOCKET/ CHIMNEY
8.2	15.9 to 17.7	7.0 to 12.0	3.0 to 5.6	2.0	Forced-Air	12.625	5.123	1.3	50W Jumbo 4-Pin	Johnson 123-211 or National XM-50 Plus two Eimac HR-8

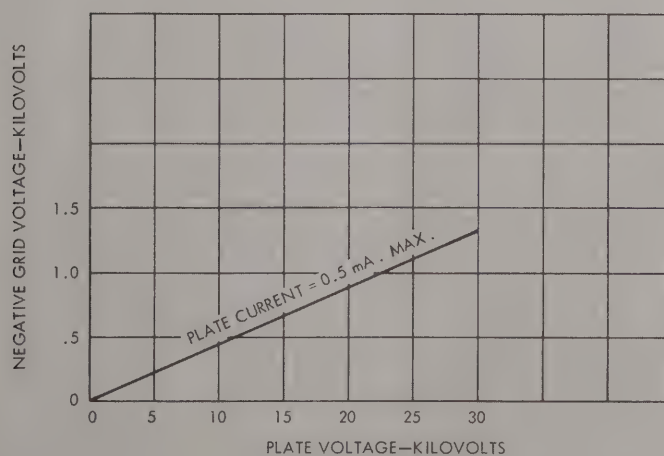


PLATE CUT-OFF
CHARACTERISTICS

6C21

INTERNAL ANODE



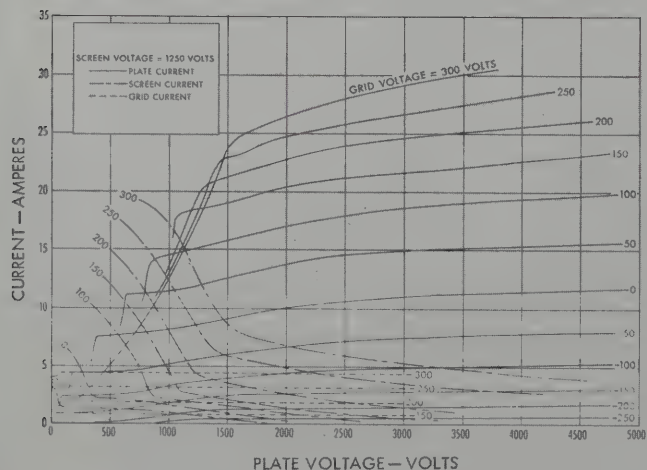
4PR60B/
8252

PERFORMANCE DATA

MAXIMUM RATINGS								TYPICAL OPERATION						
TUBE TYPE	PLATE VOLTAGE (Kv)	SCREEN VOLTAGE (Kv)	PEAK PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	MAXIMUM SEAL (°C)	PLATE VOLTAGE (Kv)	SCREEN VOLTAGE (Kv)	PULSE PLATE VOLTAGE (Kv)	PULSE PLATE CURRENT (amps)	PULSE DRIVE PWR (watts)	PULSE OUTPUT PWR (Kw)	DUTY FACTOR
4PR60B/8252	20	1.5	18	60	8	1	200	20	1.25	18.75	18	560	337	0.001

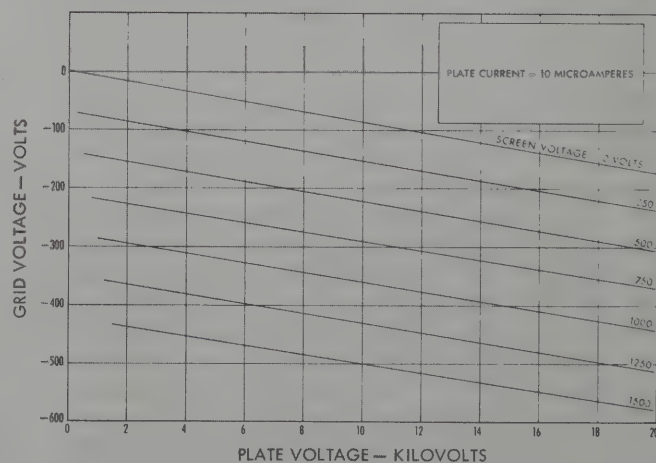
TYPICAL CONSTANT GRID
VOLTAGE CHARACTERISTICS

4PR60B/8252



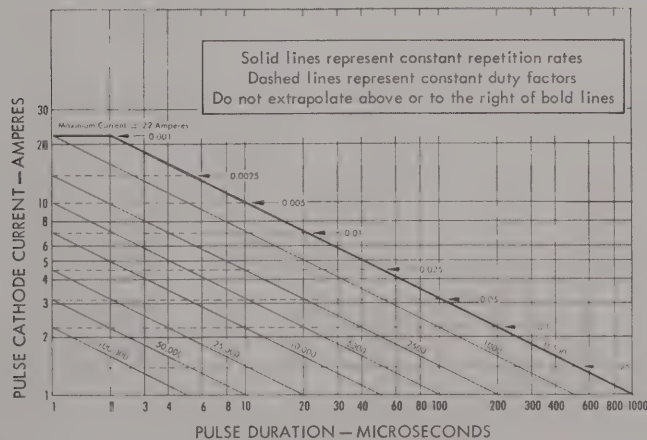
TYPICAL PLATE CURRENT
CUT-OFF CHARACTERISTICS

4PR60B/8252



CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	INPUT (pF)	OUTPUT (pF)	FEED- THROUGH (pF)	COOLING	HEIGHT (in.)	DIA (in.)	WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
26.0	1.95 to 2.35	35.0 to 50.0	6.0 to 11.0	2.0	Convection Forced Air Recommended	6.0	3.065	12	5-Pin	Johnson 122-234 Plus Eimac HR-8



**CATHODE CURRENT
DERATING CHART**

4PR60B/8252

INTERNAL ANODE



4PR65A/
8187



4PR125A/
8247

PERFORMANCE DATA

TUBE TYPE	MAXIMUM RATINGS							TYPICAL OPERATION						
	PLATE VOLTAGE (Kv)	SCREEN VOLTAGE (Kv)	PEAK PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	MAXIMUM SEAL (°C)	PLATE VOLTAGE (Kv)	SCREEN VOLTAGE (Kv)	PULSE PLATE VOLTAGE (Kv)	PULSE PLATE CURRENT (amps)	PULSE DRIVE PWR (watts)	PULSE OUTPUT PWR (Kw)	DUTY FACTOR
4PR65A/ 8187	15	2.0	1.0	65	10	5	200	15	500.0	14.3	0.95	11	13.6	0.05
4PR125A/ 8247	18	2.0	1.5	125	20	5	170	18	1.0	17.0	1.0	30	17.0	0.05
4PR400A/ 8188	20	2.5	4.0	400	35	10	200	20	1.5	18.25	3.5	35	64.0	0.02
4PR1000A/ 8189	30	2.5	8.0	1000	75	25	150	30	1.5	27.7	8.0	116	220.0	0.02
4PR1000B	30	2.5	8.0	1000	75	25	150	30	1.5	27.7	8.0	116	220.0	0.02

4PR1000B is ruggedized version of 4PR1000A
for shipboard service



4PR400A/
8188



4PR1000A/
8189



4PR1000B

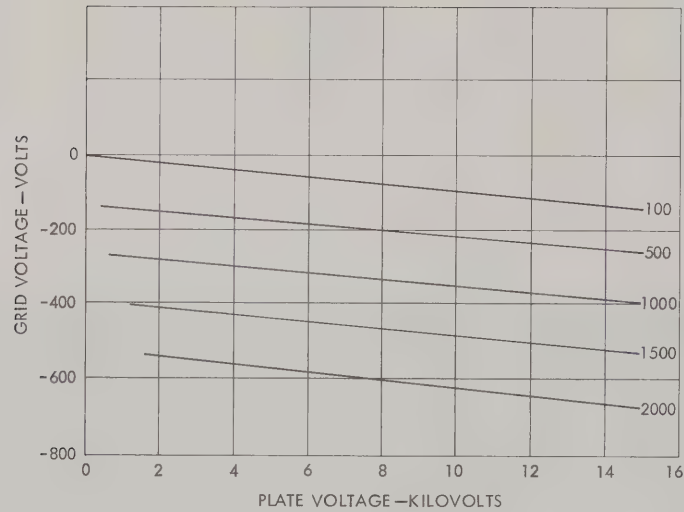
CHARACTERISTICS

CAPACITANCE

FILAMENT VOLTAGE (volts)	FILAMENT CURRENT (amps)	GRID- FILAMENT (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
6.0	3.2 to 3.8	6.0 to 8.3	1.9 to 2.6	0.12	Convection	4.19	2.38	3.0	5-Pin Metal Shell	Johnson 122-101 or National HX-29 —*— Plus Eimac HR-6
5.0	6.0 to 7.0	9.2 to 12.4	2.5 to 3.5	0.07	Forced-Air	5.69	2.81	6.5	5-Pin Metal Shell	Johnson 122-275 or National HX-100 —*— Plus Eimac HR-6
5.0	13.5 to 14.7	10.7 to 14.5	4.2 to 5.6	0.17	Forced-Air	6.38	3.5	9.0	5-Pin Metal Shell	Eimac SK-410 —*— Plus Eimac HR-6
7.5	20.0 to 22.7	23.8 to 32.4	6.8 to 9.4	0.35	Forced-Air	9.63	5.25	1.5 lb	5-Pin Metal Shell	Eimac SK-500 —*— Plus Eimac HR-8
7.5	20.0 to 22.7	23.8 to 32.4	6.8 to 9.4	0.35	Forced-Air	9.63	5.25	1.5 lb.	5-Pin Metal Shell	Eimac SK-500 —*— Plus Eimac HR-8

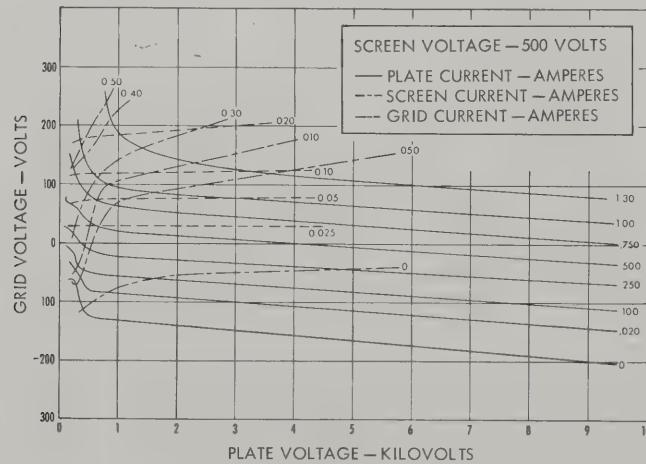
**TYPICAL
PLATE CUT-OFF
CHARACTERISTICS**

4PR65A/8187



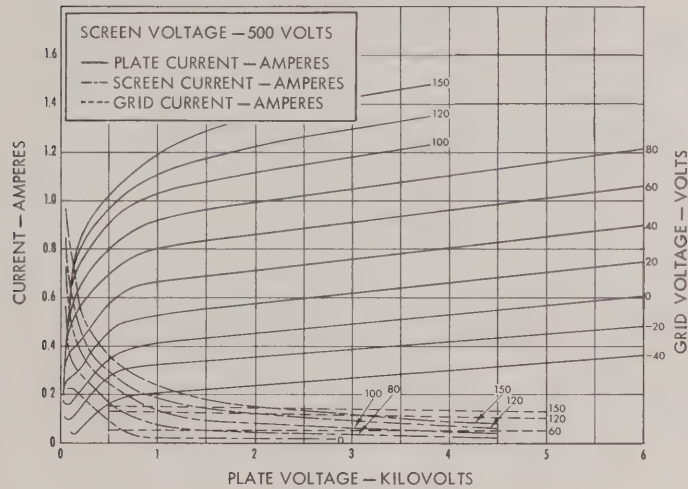
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4PR65A/8187



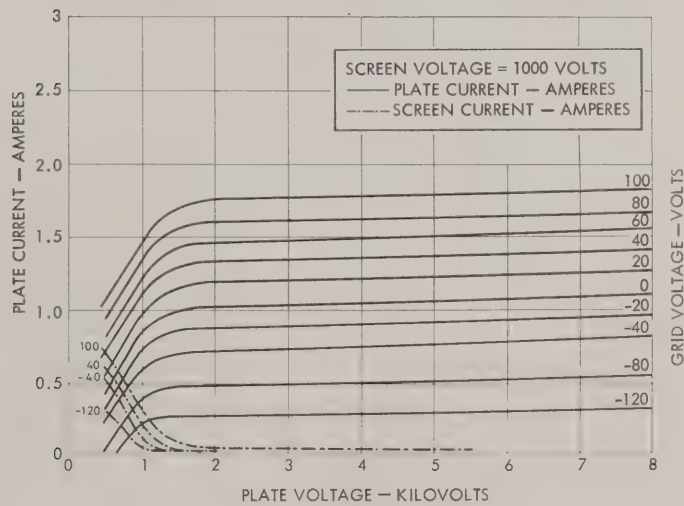
**TYPICAL
CONSTANT GRID VOLTAGE
CHARACTERISTICS**

4PR65A/8187



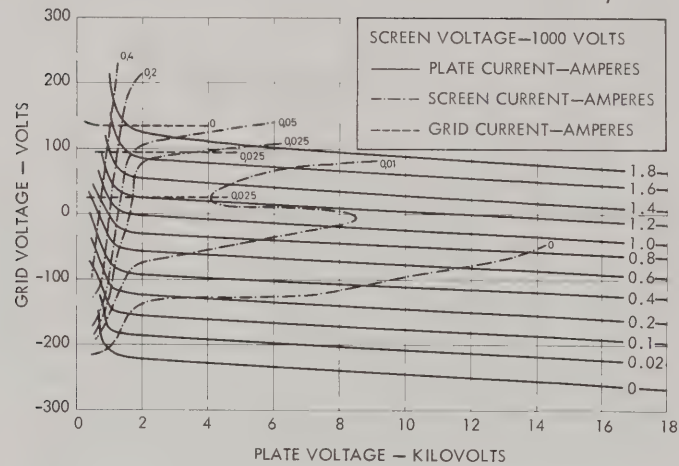
**TYPICAL
PLATE
CHARACTERISTICS**

4PR125A/8247



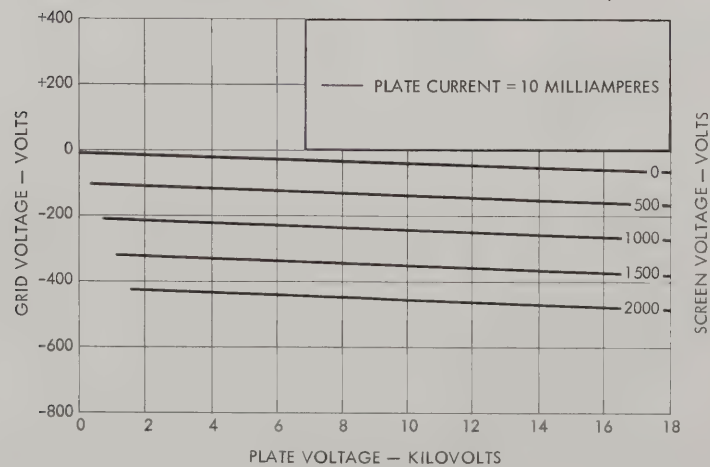
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4PR125A/8247



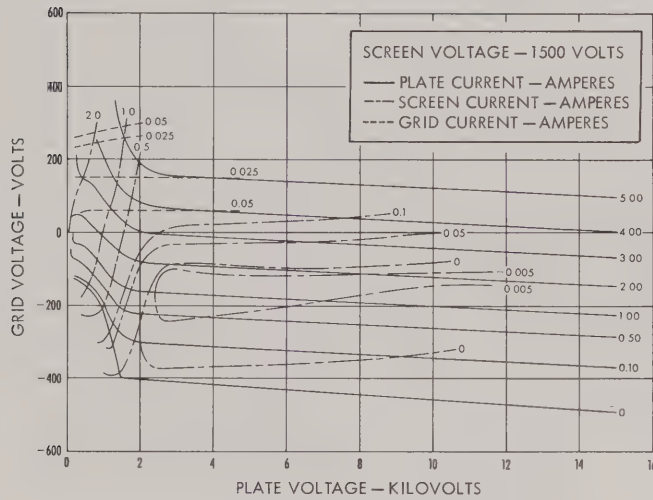
**TYPICAL
PLATE CURRENT
CUT-OFF CHARACTERISTICS**

4PR125A/8247



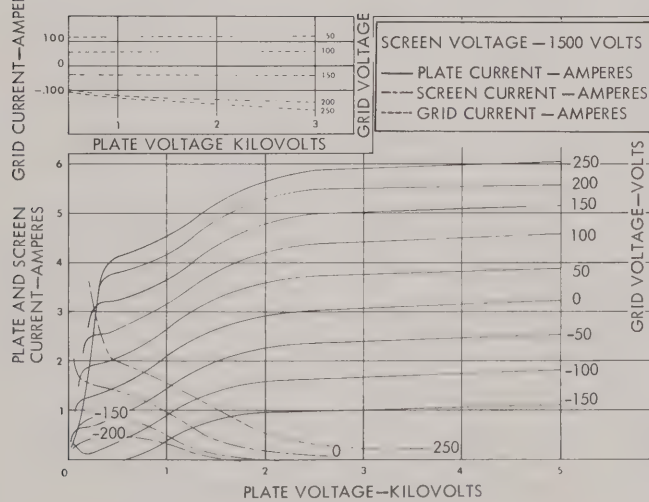
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4PR400A/8188



**TYPICAL
PLATE
CHARACTERISTICS**

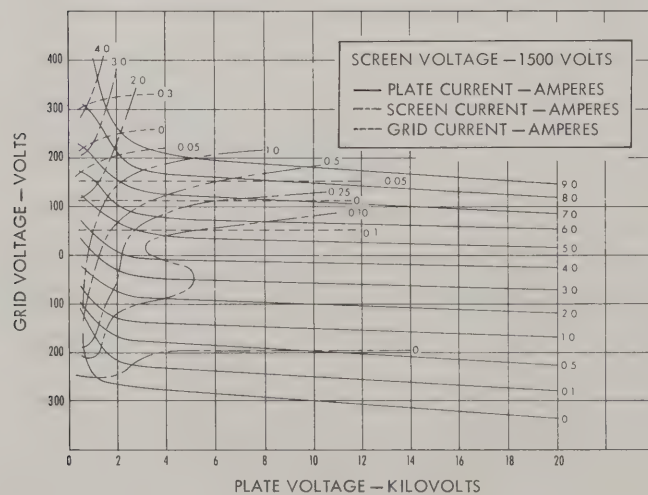
4PR400A/8188



4PR400A/8188

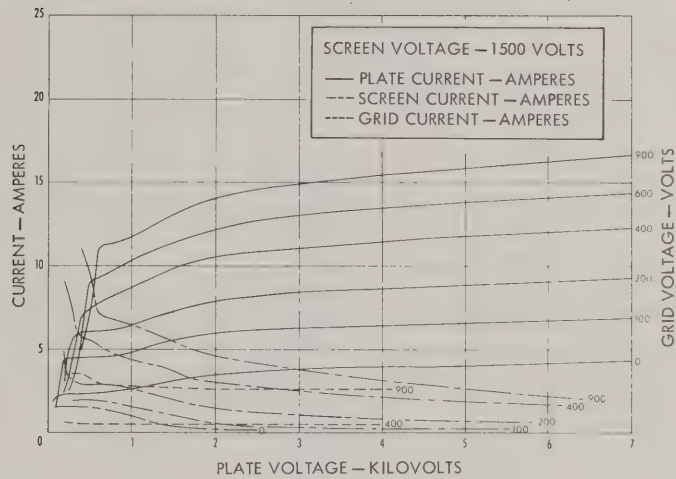


4PR1000A/8189



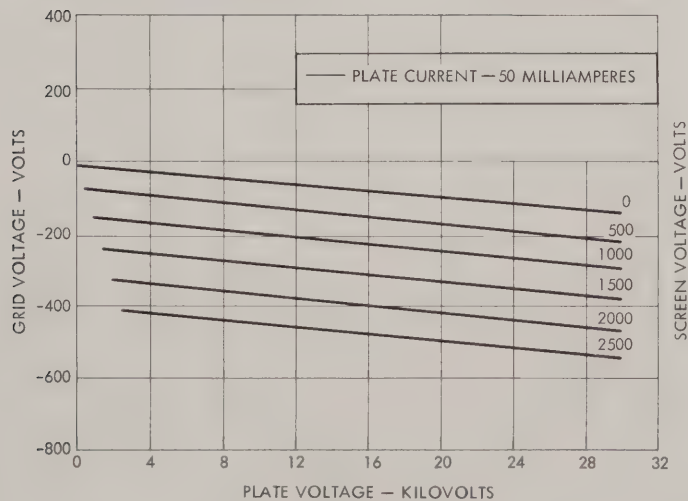
**TYPICAL
CONSTANT GRID VOLTAGE
CHARACTERISTICS**

4PR1000A/8189

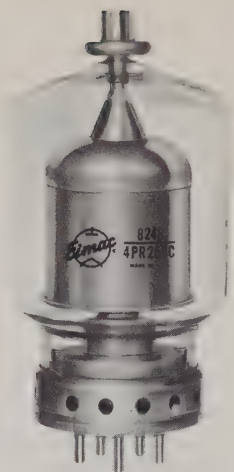


**TYPICAL
PLATE CURRENT
CUT-OFF CHARACTERISTICS**

**4PR1000A/8189
4PR1000B**



INTERNAL ANODE



4PR250C/
8248

PERFORMANCE DATA

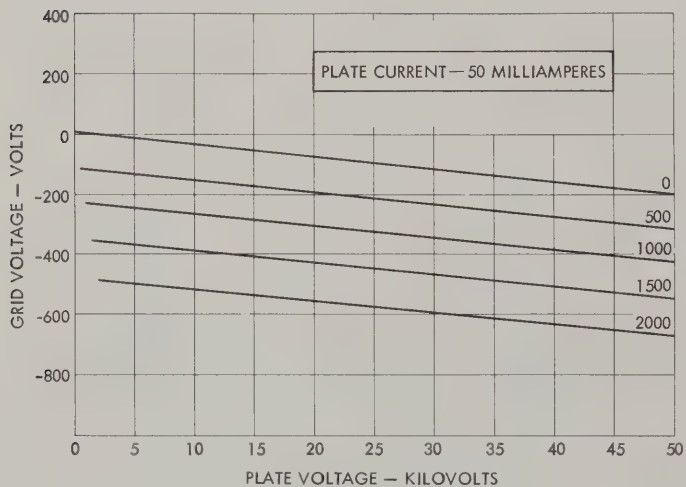
MAXIMUM RATINGS								TYPICAL OPERATION						
TUBE TYPE	PLATE VOLTAGE (Kv)	SCREEN VOLTAGE (Kv)	PEAK PLATE CURRENT (amps)	PLATE DISS (watts)	SCREEN DISS (watts)	GRID DISS (watts)	MAXIMUM SEAL (°C)	PLATE VOLTAGE (Kv)	SCREEN VOLTAGE (Kv)	PULSE PLATE VOLTAGE (Kv)	PULSE PLATE CURRENT (amps)	PULSE DRIVE PWR (watts)	PULSE OUTPUT PWR (Kw)	DUTY FACTOR
4PR250C/ 8248	50	2.0	4.0	250	25	5.0	200	50.0	1.5	48	4.0	25	192	0.015

CHARACTERISTICS

CAPACITANCE (GROUNDED CATHODE)										
FILAMENT INPUT (volts)	FILAMENT OUTPUT (amps)	FEED THROUGH (pF)	GRID- PLATE (pF)	PLATE- FILAMENT (pF)	COOLING	HEIGHT (in.)	DIA (in.)	NET WEIGHT (oz.)	BASE	SOCKET/ CHIMNEY
5.0	13.5 to 14.7	11.0 to 15.0	2.5 to 4.0	0.15	Forced-Air	7.5	3.5	12.5	5-Pin Metal Shell	Eimac SK-410 —•— Plus Eimac HR-8

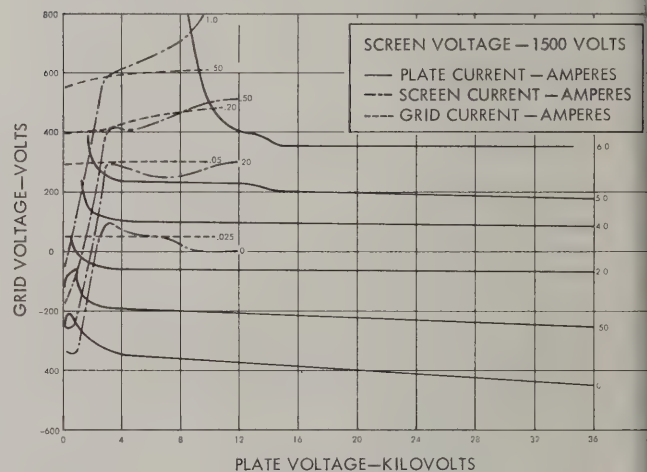
**TYPICAL
PLATE CURRENT
CUT-OFF CHARACTERISTICS**

4PR250C/8248



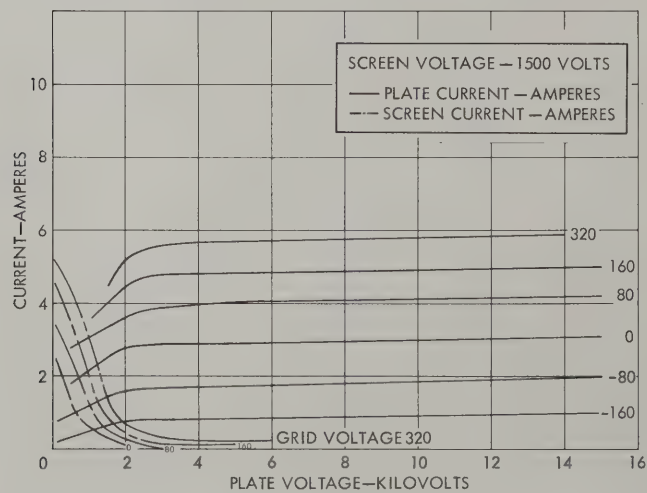
**TYPICAL
CONSTANT CURRENT
CHARACTERISTICS**

4PR250C/8248



**TYPICAL
PLATE
CHARACTERISTICS**

4PR250C/8248



SOCKETS AND ACCESSORIES

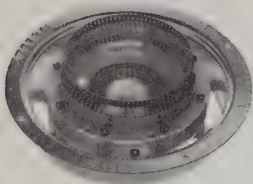
**SOCKETS AND
ACCESSORIES**

A collection of disassembled electronic components, including a large cylindrical metal can, a printed circuit board (PCB) with various components, a small black component, and several smaller cylindrical components, all laid out on a light-colored surface.

SOCKETS AND ACCESSORIES

These sockets and accessories are specifically designed for use with Eimac tubes. Choice of the proper socket insures longer tube life and better performance. All sockets incorporate low loss insulating materials. All metal parts are plated for corrosion protection. Tube contact surfaces are nonferrous spring alloy, silver plated for good rf conductivity and heat treated for positive contact and long life.

SOCKETS AND ACCESSORIES



**SK-300A
SK-310**

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-300A	4CX5000A 4CX5000R	None	.....	None	SK-306
	4CX10,000D				SK-1306
	4CX15,000A				SK-316
	4CW10,000A				None
SK-310	4CV20,000A 4CV35,000A				

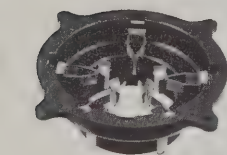
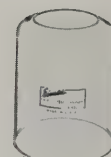
**SK-306
SK-1306
SK-316**



SK-400

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-400	4-125A 4-250A 4-400A 4PR125A 4PR250C 4PR400A	None		None	SK-406

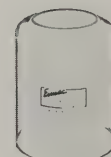
SK-406



SK-410

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-410	3-400Z	None	.....	None	SK-416
	4-125A 4-250A 4-400A 4PR125A 4PR400A				SK-406
	4PR250C				None

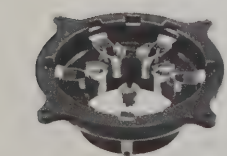
**SK-416
SK-406**



SK-500

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-500	4-1000A 4PR1000A	None		None	SK-506

SK-506



SK-510

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-510	3-1000Z	None	.....	None	SK-516
	4-1000A 4PR1000A				SK-506

**SK-516
SK-506**





SK-600
SK-600A
SK-610
SK-611
SK-612

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-600 SK-600A SK-611	4X150A 4X150D 4CX250B 4CX250F	2700	400	None	SK 606
SK-610	4CX250R 4W300B			Cathode	
SK-612*	4CX350A 4CX350F			1 Heater Cathode	

*The SK-612 differs from the SK-600 by addition of a base pin contact spring and retainer

SK-606

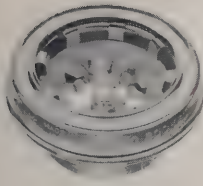


SK-604A
SK-604B

This tube puller is designed for use in removing coaxial-base and 9-pin-base tubes from their sockets without damage. The 4X150 series and 4CX250 series tubes may be removed with this puller. SK-604A has a bond-erize finish, SK-604B is nickel-plated.

These special pliers are designed for use in removing breechblock base tubes from their sockets without damage. The 4CX300 series and 4CX1000 series tubes may be removed with these pliers.

SK-605



SK-620
SK-620A
SK-630
SK-630A

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-620 SK-620A	4X150A 4X150D 4X150R 4X150S	1100	1000	None	SK-626 SK-636B
SK-630 SK-630A	4CX250B 4CX250F 4CX250R			Cathode	None

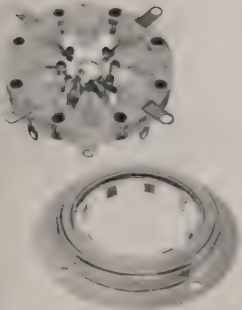
SK-626
SK-636B



SK-640

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-640	4X150A 4X150D 4CX250B 4CX250F 4CX250R 4CX350A 4CX350F	None		None	SK-606 None

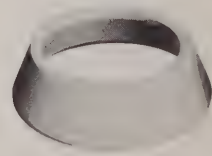
SK-606



SK-650
SK-655

AIR SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-650 SOCKET	4X150A 4X150D 4CX250B 4CX250F	None	...	Cathode	None
SK-655 CAPACITOR	4CX250R 4CX350A 4CX350F	1100	1000		SK-626 None

SK-626



SOCKETS AND ACCESSORIES

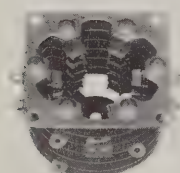


SK-700
SK-710
SK-711A
SK-712A

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-700	4CN15A 4CX125C 4CX125F 4CX300A	1100	400	1 Heater	SK-606
SK-710				1 Heater	
SK-711A*				Cathode	
SK-712A*				1 Heater	

*The SK-711A and SK-712A differ from the SK-710 and SK-700 only in the altitude rating. The capacitor decks of the SK-711A and SK-712A have been especially flanged and the exposed section of the dielectric is sealed to permit a screen voltage of 350 Vdc at 60,000 feet

SK-606



SK-740

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-740	4CN15A 4CX125C 4CX125F 4CX300A 4CX300Y	None		None	



SK-760
SK-761
SK-770

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-760 SK-761*	4CX300A 4CX300Y	None		None	Integral Chimney
SK-770				Screen	

*The SK-761 is the same as the SK-760, except input capacitance has been reduced by reducing the number of contact fingers



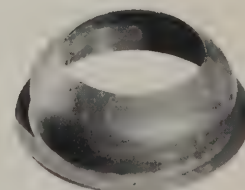
SK-800B
SK-810B
SK-820
SK-830
SK-860
SK-870
SK-890B

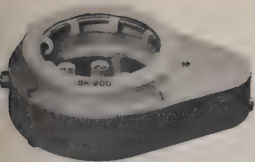
AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK 800B	4CX1000A 4CW2000A†	1500	400	None	SK-806
SK 810B SK-890B *		None			Integral
		1500	400	Cathode 1 Heater	SK-806
SK-820	4CX1000K	None		Screen	SK-806
SK-830		1500	400	Cathode	
SK-860	3CX1000A7	None		None	SK-816
SK-870				Grid	

*Screen bypass capacitor isolated from screen contacts.

†No chimney necessary

SK-806
SK-816

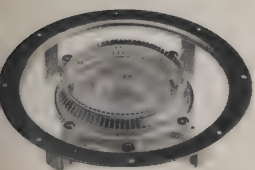
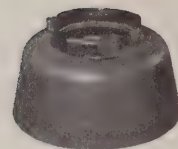




SK-900

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK 900	4X500A	650	700	None	SK 906

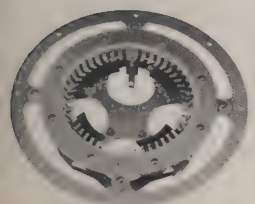
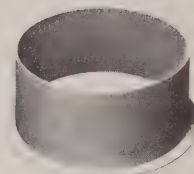
SK-906



**SK-1300
SK-1310**

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-1300	3CX10,000A1 3CX10,000A3 3CX10,000A7	None	None	None	SK-1306
	3CW20,000A1 3CW20,000A3 3CW20,000A7				None
	3CV30,000A3				None

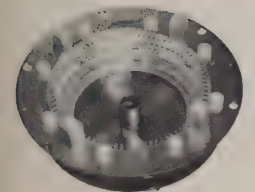
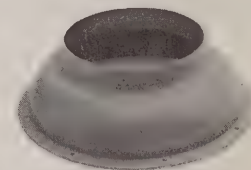
SK-1306



**SK-1400A
SK-1470A
SK-1490**

AIR-SYSTEM SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)		
SK-1400A	4CX3000A	1800	1000	None	SK-1406
SK-1470A		None	None	Screen	
SK-1490	4CV8000A			None	None

SK-1406



**SK-1500
SK-1510**

SOCKET	TUBE	SCREEN BYPASS CAPACITOR		GROUNDED CONTACTS	CHIMNEY	TUBE POSITIONER
		CAPACITANCE (pF)	VOLTAGE RATING (volts dc)			
SK-1500	4CX35,000C	None	None	None	None	SK-1511
SK-1510	4CV100,000C					

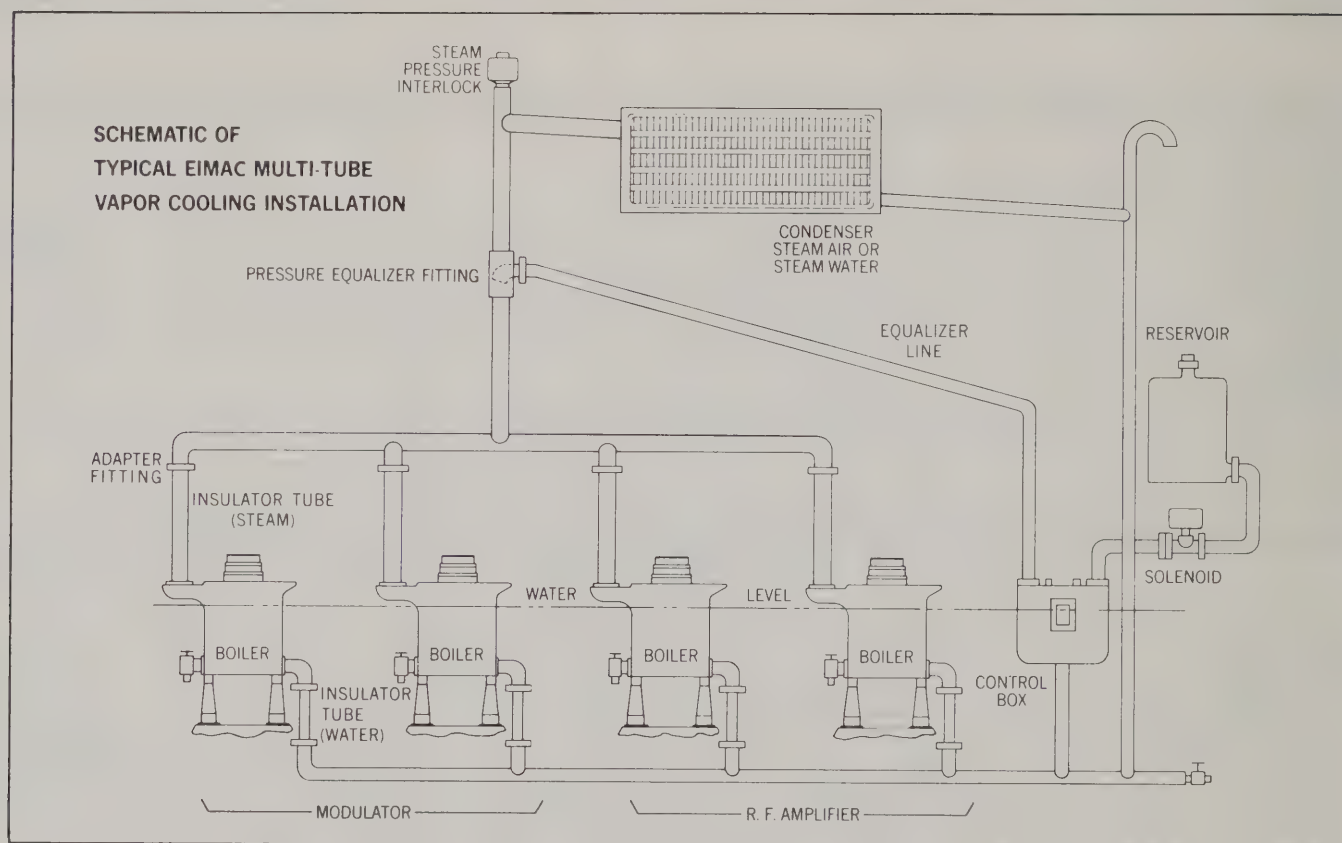
SK-1510 is similar to SK-1500, and incorporates the SK-1511 tube positioner

For operation in corrosive environments, such as oil, any of these sockets can be supplied gold-plated with a rhodium flash. For example, Y231 is an SK-740 socket, modified by this special plating.

CUSTOM SOCKET DESIGN:

For special applications which require features different from these standard sockets, custom designed sockets are offered. These may be modifications of the standard sockets or completely new designs, manufactured to customer drawings or Eimac design. Common modifications include contact spacing, mounting features, encapsulation of components, grounded contacts, by pass capacitors, insulating materials, contact materials, and plating.

VAPOR-PHASE COOLING ACCESSORIES



In order to take the guess work out of using vapor cooling, Eimac has developed a complete line of accessories to complement its new series of vapor-cooled tubes. All the components labeled in the system below are available from Eimac.

For more information on how this cooling technique can improve the performance of your equipment,

write for a free copy of Application Bulletin Number 11, "The Care and Feeding of Vapor-Phase Cooling." Also available from Eimac is application engineering assistance in planning vapor-cooled systems. Eimac representatives can put you in touch with the same people who produced the first completely integrated vapor-phase cooling packages.



BOILER

Boiler design must be compatible with tube design to realize the full potential of a vapor-cooled tube. The Eimac boilers are complete with inlet and outlet connections, anti-corrosion target and mounting provisions. They are used with Eimac 8- to 100-kilowatt vapor-cooled tubes.

BOILER	TUBE TYPE
BR-101	4CV8000A
BR-200	4CV20, 000A 3CV30, 000A3 4CV35, 000A
BR-300	4CV100, 000C
BR-400	7480



BOILER

This special boiler for the 4CV100,000C uses a "steam-out-the-bottom" arrangement. It is designed for applications where it is desirable to keep all plumbing below the tube. This system requires a small pump to keep a constant water level.

BOILER	TUBE TYPE
BR-310	4CV100,000C



DOUBLE BOILER

A special double boiler, the BR-500, is available for use with two parallel 4CV100.000C tetrodes. The boiler is rated at 200 kilowatts dissipation

BOILER	TUBE TYPE
BR-500	2-4CV100.000C



CONTROL BOX

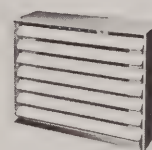
The Eimac CB-102 and CB-202 Control Boxes serve as level monitoring devices and as reservoirs. They contain an overflow siphon and two water-level switches for activating an alarm system and for equipment shut-down in case of low water level.

CONTROL BOX	TUBE TYPE
CB-102	4CV8000A
CB-202	4CV20.000A
	3CV30.000A3
	4CV35.000A
	4CV100.000C



CONDENSERS

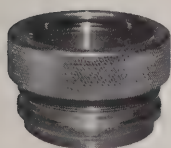
Reliable steam-to-air and steam-to-water condensers are available in several sizes from Eimac. Air cooled types are available with fans and motors.



INSULATOR TUBE

Heavy Pyrex glass tubing, matching the inlet and outlet connectors on the Eimac boilers, is also available. It serves as water or steam plumbing as well as electrical insulation. Standard length is 24 inches. Special lengths can be made to order.

BOILER	STEAM LINE	WATER LINE
BR-101	1 3/4 in.	1/2 in.
BR-200	2 1/2 in.	1/2 in.
BR-300	3 1/2 in.	3/4 in.



ADAPTER FITTING

An adapter to make the transition from the Pyrex steam tube to copper pipe.

ADAPTER FITTING	SIZE
AF-100	1 3/4" Pyrex to 2" Cu
AF-200	2 1/2" Pyrex to 2 1/2" Cu
AF-300	3 1/2" Pyrex to 3 1/2" Cu
AF-102	12 mm Pyrex to 1/2" MPT
AF-202	18 mm Pyrex to 3/4" MPT
AF-302	28 mm Pyrex to 1" MPT



STEAM PRESSURE INTERLOCK

Used to sense steam pressure and to remove power from the tube in the event of excessive pressure. The unit is set for 0.5 pounds per square inch above atmospheric pressure.

EQUALIZER FITTING (not shown)

A special Tee fitting for connecting the equalizer line to the steam line.

EQUALIZER FITTING	SIZE
AD-100	2" C x 2" C x 1/2" C
AD-200	2 1/2" C x 2 1/2" C x 1/2" C
AD-300	3 1/2" C x 3 1/2" C x 1/2" C

OPTIONAL ACCESSORIES



SOLENOID WATER VALVE

SIZE
1/2" FPS
1/2" Cu

Large silicon-bronze solder fittings are now available from Eimac. These are used in vapor systems to eliminate the contamination which occurs with brass fittings. Tees, elbows, crosses, unions, reducers, flanges and caps can be supplied in sizes up to 6" I.D.

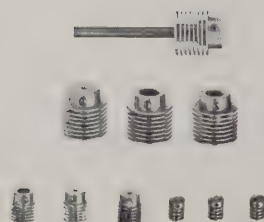


RESERVOIR

RESERVOIR	CAPACITY
RE-100	0.5 liter
RE-200	1.0 liter
RE-300	4 liter

OTHER PRODUCTS

HEAT DISSIPATING CONNECTORS Eimac HR Heat-Dissipating Connectors are used to make electrical connections to the plate and grid terminals of Eimac Tubes, and at the same time, provide efficient heat transfer from the tube element and glass seal to the air. These connectors are machined from solid dural rod and are supplied with the necessary set screws.



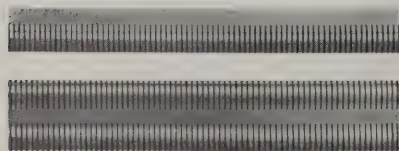
TYPE *	Length	Dia.	Hole Dia.
HR-1	11/16"	1/2"	.052"
HR-2	11/16"	1/2"	.062"
HR-3	11/16"	1/2"	.072"
HR-4	7/8"	3/4"	.102"
HR-5	7/8"	3/4"	.127"
HR-6	7/8"	3/4"	.367"
HR-7	1-11/32"	1-3/8"	.127"
HR-8	1-11/32"	1-3/8"	.575"
HR-9	4-11/32"	1-3/8"	.569"
HR-10	1-11/32"	1-3/8"	.510"

RECOMMENDED CONNECTORS FOR USE WITH EACH EIMAC TUBE TYPE

TUBE	Plate Connector	Grid Connector	TUBE	Plate Connector	Grid Connector
2-25A	HR-1	....	25T	HR-1	
2-50A	HR-3	....	35T	HR-3	
2-150D	HR-6	....	35TG	HR-3	HR-3
2-240A	HR-6	....	75TH-TL	HR-3	HR-2
2-450A	HR-8	....	100TH-TL	HR-6	HR-2
2-2000A	HR-8	....	VT127A	HR-3	HR-3
3-1000Z	HR-8	....	250TH-TL	HR-6	HR-3
3C24	HR-1	HR-1	250R	HR-6	
4-65A	HR-6	....	304TH-TL	HR-7	HR-6
4D21/4-125A	HR-6	....	450TH-TL	HR-8	HR-8
5D22 4-250A	HR-6	....	592/3-200A3	HR-10	HR-5
4-400A	HR-6	....	750TL	HR-8	HR-8
4-1000A	HR-8	....	866A	HR-8	
4E27A/5-125B	HR-5	....	872A	HR-8	
4PR60A	HR-8	....	1000T	HR-9	HR-9
6C21	HR-8	HR-8	1500T	HR-8	HR-8
KY21A	HR-3	....	2000T	HR-8	HR-8
RX21A	HR-3	....	8020/100R	HR-8	

*For marking per MIL-STD-130B add prefix letter "M" to the part number for connectors HR-4 through HR-10. Note HR-1 through HR-3 are too small to permit marking.

PREFORMED CONTACT FINGER STOCK Eimac Preformed Finger Stock is a prepared strip of spring material slotted and formed into a series of fingers designed to make a sliding contact. It is especially suitable for making connections to tubes with coaxial terminals or to moving parts, such as long-line and cavity circuits or screen-room doors. Eimac finger stock is available in 9 different shapes and sizes, three of which incorporate "spooned" contact fingers. All sizes come in standard 36 inch lengths. Standard stock is heat treated and silver plated. Also available without heat treating or plating.



Type	Finger Radius (inches)	Finger Width (inches)	Slot Width (inches)	Slot Depth (inches)	Comments
CF-100	1/16	1/8	0.040	9/32	spooned
CF-200	1/16	1/8	0.040	9/32	double-edged
CF-300	13/64	1/8	0.040	19/32	finger tip has reverse radius
CF-400	13/64	1/8	0.040	35/64	double-edged
CF-500	15/32	1/8	0.040	7/8	finger tip has reverse radius
CF-600	15/32	1/8	0.040	29/32	double-edged with reverse tip radii
CF-700	1/16	1/8	0.040	9/32	spooned
CF-800	1/16	1/8	0.040	15/32	spooned and bent
CF-900	0.030	1/16	0.020	15/64	smallest fingers

**POWER
GRID
PRODUCTS**

EIMAC will be glad to furnish additional information on the products listed below. Simply note your product interest on a reply card and mail. Prompt response is assured.

Rectifiers (specify)
Triodes (specify)

Tetrodes (specify)
Pentodes (specify)

Pulse Tubes (specify)
Vapor Phase Cooling

Date _____

Please send me further information on the following Eimac products:

My application is _____

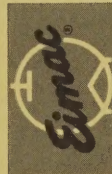
Special requirements _____

Name _____

Title or Position _____

Company _____

Address _____



EIMAC Division of Varian

301 INDUSTRIAL WAY • SAN CARLOS, CALIFORNIA 94070

Date _____

Please send me further information on the following Eimac products:

My application is _____

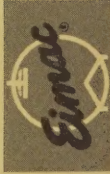
Special requirements _____

Name _____

Title or Position _____

Company _____

Address _____



EIMAC Division of Varian

301 INDUSTRIAL WAY • SAN CARLOS, CALIFORNIA 94070

Date _____

Please send me further information on the following Eimac products:

My application is _____

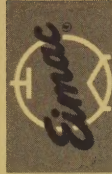
Special requirements _____

Name _____

Title or Position _____

Company _____

Address _____



EIMAC Division of Varian

301 INDUSTRIAL WAY • SAN CARLOS, CALIFORNIA 94070

BUSINESS REPLY MAIL

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY

EIMAC Division of Varian

301 INDUSTRIAL WAY

SAN CARLOS, CALIFORNIA 94070

FIRST CLASS

PERMIT No. 103

San Carlos, Calif.

BUSINESS REPLY MAIL

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY

EIMAC Division of Varian

301 INDUSTRIAL WAY

SAN CARLOS, CALIFORNIA 94070

FIRST CLASS

PERMIT No. 103

San Carlos, Calif.

BUSINESS REPLY MAIL

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY

EIMAC Division of Varian

301 INDUSTRIAL WAY

SAN CARLOS, CALIFORNIA 94070

FIRST CLASS

PERMIT No. 103

San Carlos, Calif.



varian
electron tube and device group

SALES OFFICES

ALBUQUERQUE

9000 Menaul Blvd., N.E.
Albuquerque, N.M. 87112
TEL: (505) 296-1248

ATLANTA

3110 Maple Drive, N.E.
Suite #103
Atlanta, Georgia 30305
TEL: (404) 261-4572
TWX: 404-231-4881

BOSTON

400 Wyman Street
Waltham, Massachusetts 02154
TEL: (617) 891-4560
TWX: 617-894-8594

CHICAGO

Executive Plaza Office Bldg.
205 W. Touhy Avenue
Park Ridge, Illinois 60068
TEL: (312) 825-6686
TWX: 312-825-3334

DALLAS

First Bank & Trust Building
P.O. Box 689
Richardson, Texas 75081
TEL: (214) 235-2385
TWX: 214-231-1403

DAYTON

Southmoor Building
10 Southmoor Circle
Dayton, Ohio 45429
TEL: (513) 298-7318
TWX: 513-944-0546

LOS ANGELES

2901 Wilshire Boulevard
Santa Monica, California 90403
TEL: (213) 451-5877
TWX: 910-343-6868

NEW YORK

2005 Route 22
Corner Fairway Drive
Union, New Jersey 07083
TEL: (201) 688-8800
TWX: 201-687-9514

PHILADELPHIA

1500 Kings Highway
Cherry Hill, New Jersey 08034
TEL: (609) 428-6800
TWX: 609-429-4105

PHOENIX

77 Third Avenue, West
Scottsdale, Arizona 85251
TEL: (602) 947-5461
TWX: 602-949-0165

SAN FRANCISCO

435 Harbor Boulevard
Belmont, California 94002
TEL: (415) 592-1841
TWX: 415-594-8884

SYRACUSE

847 James Street
Syracuse, New York 13203
TEL: (315) 472-7051
TWX: 315-477-1240

TAMPA

314 South Missouri, Suite #205
Clearwater, Florida 33516
TEL: (813) 446-8513
TWX: 813-442-2270

WASHINGTON, D.C.

714 Church Street
Alexandria, Virginia 22314
TEL: (703) 549-8205
TWX: 703-931-4210

DIVISIONS & SUBSIDIARIES

BOMAC DIVISION

Salem Road
Beverly, Massachusetts 01915
TEL: (617) 922-6000
TWX: 617-922-1987

CALIFORNIA AVENUE OPERATION

601 California Avenue
Palo Alto, California 94304
TEL: (415) 326-4000
TWX: 415-492-9253

EIMAC DIVISION

301 Industrial Way
San Carlos, California 94070
TEL: (415) 592-1221
TWX: 415-594-8842

1678 South Pioneer Road
Salt Lake City, Utah
TEL: (801) 487-7561

LEL DIVISION

Akron Street
Copiague, L.I., New York 11726
TEL: (516) 264-2200
TWX: 516-691-5085

NATIONAL ELECTRONICS, INC.

A Varian Subsidiary
Geneva, Illinois 60134
TEL: (312) 232-4300
TWX: 312-232-0590

PALO ALTO TUBE DIVISION

611 Hansen Way
Palo Alto, California 94303
TEL: (415) 326-4000
TWX: 415-492-9253

S-F-D LABORATORIES, INC.

A Varian Subsidiary
800 Rahway Avenue
Union, New Jersey 07083
TEL: (201) 687-0250
TWX: 201-687-0333

VARIAN ASSOCIATES OF CANADA, LTD.

45 River Road
Georgetown, Ontario, Canada
TEL: (416) 877-6901
TWX: 002-95628

EIMAC

division of varian

electron tube and device group

san carlos / california • salt lake city / utah

